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MEETING COMPETITION—

of other forms of transportation is one of the major problems confronting the railroads. Its solution calls for higher average speeds in both freight and passenger service.

Only *modern locomotives*, reflecting the advancement in the art during the past twelve years, can haul heavy tonnage at the speeds demanded today.

This alone might justify the purchase of new power —

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PHILADELPHIA

Are We Drifting Toward Government Ownership?

It is far from certain that in a comparatively short time the American people will not find that government ownership of railways is the most important question confronting them. Federal Co-ordinator of Transportation Joseph B. Eastman a few months ago expressed his inclination to the belief that government ownership "will be the ultimate solution of the railroad problem," but added: "However, if and when that time arrives, the impelling motive will probably not be logic or theory, but the practical one that private enterprise and capital will not be able to carry on successfully." The Transportation Conference of 1933-4 was participated in by representatives of numerous important financial, industrial and transportation organizations. It said in its report dated March 16: "There appears to exist no consciously formulated demand and no organized agitation for government ownership of the railways. The absence of such vocal demands lulls the public into the belief that the issue is not imminent or vital at this time. But a policy of drift and inaction can later on render the issue imminent through default of effort to avert such an outcome."

A policy worse than "drift and inaction" has since been followed. In an editorial in its issue of March 31, the *Railway Age* expressed the opinion that if the railroads went into government ownership many other industries would accompany them, but that a change of public sentiment to the right would occur in time to prevent this. We still believe that adoption of government ownership of railways would be accompanied, or soon followed, by government ownership of other large industries. Developments of major importance affecting the railways which have occurred within the last three months tend, however, to shake confidence in their future.

Railway Traffic and Expenses

A recession of general business has, temporarily at least, arrested the growth of freight business. During the five months following October, 1933, car loadings increased more than seasonally from 57.3 per cent of the 1925-1929 average in November to 64 per cent of that average in March. They have since increased less than seasonally until in the first three weeks of July they were only 59 per cent of the 1925-1929 average—relatively the lowest level reached in 1934. In March they were 33 per cent greater than in March, 1933; in

the first three weeks of July $5\frac{1}{2}$ per cent less than in 1933.

This recession in railway traffic and earnings has been accompanied by advances in the prices of materials, agreements to advance wages and pension legislation, the cumulative effect of which, if and when they all go into effect, will be to increase operating expenses about \$30,000,000 a month. Assuming a normal seasonal increase, the net operating income earned in the first five months of this year indicated a net operating income for the entire year of less than \$50,000,000 a month. This will not now be earned in 1934, and only a large increase of traffic, an advance in rates or relief, by retrenchment or otherwise, from the heavy increase of operating expenses in prospect, can save the railway industry from being confronted with an extremely serious financial situation. Are we approaching the practical fact that, in Co-ordinator Eastman's language, "private enterprise and capital will not be able to carry on successfully?" The nation must face that question. All intelligent and thoughtful students have anticipated that if and when government ownership came it would be due to inability of the railway industry to finance itself under private ownership.

Government Ownership—the Prospective Deficit

There was formerly much more discussion of government ownership than recently. Government operation during the war practically killed the sentiment for it. The time apparently has come when it must be discussed on its merits. The lack of sentiment in favor of it cannot be relied upon to prevent it. If it is to be prevented there must be created an active sentiment against it which will cause policies to be adopted to prevent it.

There is a lot of talk in high places in government and business about government ownership being "inevitable." There was the same kind of defeatist talk after government operation was adopted in 1918, but the railways were returned to private operation. Government ownership is no more "inevitable" now than it was then. It is not the "only solution" of the railway problem, as many say, because it would not be a solution at all. The railroad problem presented after government ownership was adopted would be much more difficult and dangerous than that presented now. The only real solution of the problem is to face the facts and

advocate and adopt the policies necessary to preserve private ownership.

Let us briefly consider some of the things that government ownership would involve. It would necessitate a vast increase in the indebtedness of the Federal government when its indebtedness already will be larger than ever before. Co-ordinator Eastman has used figures in public utterances indicating that the investment in the railroads to June 1, 1933, exceeded \$26,000,000,000, and that their cost of reproduction new, less depreciation, under prices of June, 1933, would be about \$21,000,000,000. These figures give some indication of what the government would have to pay under the constitutional provision prohibiting confiscation. Annual interest at 4 per cent on the smaller figure mentioned would be \$840,000,000, and on the larger figure \$1,040,000,000, or from \$300,000,000 to \$500,000,000 more than the total income that the railways had in 1932 for paying interest and dividends. The government could hardly avoid the increases in operating expenses of \$360,000,000 annually to which the railways are being subjected under its own policies. In the absence, therefore, of a general advance in rates or a large increase in taxes, the immediate effect of the adoption of government ownership now would be to subject the government to an annual loss of \$650,000,000 to \$850,000,000, to be met by taxation.

Adding 1,000,000 Government Employees

The experience of this country during the war, of Canada and of almost the entire world negatives any hope that the taxpayers would ever get any relief from this deficit. Whatever the future increase in earnings, all experience indicates that the future increase in operating expenses would be greater. Under government operation in this country in 1918-1919 annual gross earnings increased \$1,135,000,000 owing to advances in rates, but annual operating expenses increased \$1,593,000,000 or 40 per cent more.

Government ownership would immediately add 1,000,000 railway employees to the present unprecedented number of government employees. Increase of traffic would further increase the number of railway employees, which in 1929 was 1,694,000. Their work would no longer be supervised by trained officials of private companies selected for their ability and intent upon efficiency and economy, but by government officials selected largely for political reasons, subject to political influence, and therefore not principally concerned about efficiency and economy. Negotiations regarding wages and working conditions would be conducted by these political officials and labor leaders, and there would inevitably be a struggle between them for power. Which would win would depend on whether socialist-labor or fascist policies prevailed in the government. The prevalence of socialist-labor policies would enable the labor leaders to dictate to the government and to increase greatly the burden of transportation costs which the public would have to pay in rates and taxes. Triumph of the equivalent of fascism or nazism would destroy the labor leaders and the labor

unions themselves, and impose restrictions upon both the political and economic freedom of railway employees such as those of this country never have experienced, but which the employees of most of the government-owned railway systems of Europe could tell them much about.

State and Local Railway Taxes

In 1932 the Class I railways paid \$263,500,000 in taxes to the state and local governments; in 1929, almost \$305,000,000. No state or local government can tax property owned by the federal government without its consent. The federal government immediately limited state and local taxation of the railways operated by it during the war. If they became the property of the federal government, it probably would not let the state or local governments tax them at all, as it refuses to let them tax property owned by it now. The state and local governments would then have to get from incomes and other property the large part of their taxes that they now derive from the railways.

The numerous ways in which government ownership of railways would cause revolutionary political and economic changes, in addition to those by which economic recovery has been so retarded within the last year, afford sufficient reasons why all who do not want this country revolutionized into a socialist or fascist state should favor policies necessary to preserve private ownership.

The most vital essential to preventing government ownership is opportunity for the railways to make enough net earnings to finance the continued existence of private ownership. Discussion demonstrating the undesirability of government ownership will alone be futile. There are only two ways in which the net earnings necessary to preserving private ownership can be secured. One is by preventing unwarranted increases in operating expenses. They are being unwarrantably increased. The other is by increasing gross earnings. They can be increased either by increasing railway traffic or by advancing rates upon traffic that can bear it.

How to Prevent Government Ownership

It has been and still is the opinion of the *Railway Age* that the present general policy of increasing wages, costs and prices in industry is wholly unsound as a means of promoting economic recovery. Unfortunately, that opinion has been supported by developments throughout the last year. This general policy helped cause a recession of general business during August, September and October, 1933. It has helped cause another recession during April, May, June and July, 1934, in spite of vast and increasing government expenditures to "prime the pump" of business. The railways are justified in seeking an advance in rates only because of the menacing financial situation into which the government's economic policies are forcing them.

The right ways to increase the earning capacity of the railways and arrest their drift toward government ownership are obvious. The increases in their unit costs and in the unit costs and prices of the industries

from which they buy should be stopped. The agreement to advance railway wages must be carried out until they have been fully restored on April 1, 1935, but unless meantime traffic and gross earnings largely increase a movement to reduce wages should be started immediately after that date. Appeal to the courts should be made from the railway pension legislation recently enacted by Congress.

The long-and-short haul section of the Interstate Commerce Act should be modified and legislation should be enacted by the state and federal governments to abolish subsidies to competing carriers and to regulate them as the railways are regulated to enable the railways to increase their gross earnings by recovering traffic which they are economically best fitted to handle. If the unwarranted increases in the operating expenses of the railways and diversion of traffic from them are not to be stopped, then rates should be advanced upon all traffic that will not thereby be driven to competing means of transportation.

The problem presented by existing conditions and trends in the railway industry probably transcends in importance to the public any other problem with which it is confronted. The way it is settled is very likely to determine the way in which many or most of the nation's important industries will be dealt with, and therefore whether private ownership and management of all large industries, or state socialism or fascism, will be the future policy of the nation. Presented with such an issue, it is difficult to believe that professional, agricultural and business leaders and interests will not rally to the support of policies necessary to the preservation of private ownership.

"Why Let Railroads Write Truck Laws?"

Commenting upon the presence of representatives of railways and railway employees at the recent National Conference on Street and Highway Safety at Washington, D. C., which refused to endorse uniform restrictions on trucks to allow mammoth vehicles on the highways, our contemporary "Automotive Industries" quotes from a letter of a "prominent and experienced truck executive," in part as follows:

"Can you picture a delegation of 59 or more motor truck operators being admitted to a railroad safety conference and permitted to discuss and vote on such questions as the size and weight of locomotives and cars, the length of freight trains and the minimum speeds at which they must ascend a — per cent grade?"

Frankly, no—we cannot picture the railways throwing open to truck operators a meeting to determine railway operating practices. But there is this distinction between railways and highways which apparently is too subtle for the "prominent truck executive" to grasp, and that is that the railways own their roadways, whereas the highways belong to the public who

share their use with commercial vehicles, which, incidentally are tolerated on the roads not by right, but by sufferance. "The truck operators do not own the highways. They just act as if they do"—as a humorist—we believe it was Howard Brubaker—has observed.

When the truck operators build and pay for their own roads, they will then have the right to determine the size of the vehicles they will operate. Until they do this, their contention that railroad men or any other citizens who help to pay for the roads should be denied a voice in determining the policies governing their use sounds pretty arrogant, even for a truck operator. And incidentally, since the purpose of the Washington conference was the promotion of safety on the highways, it is well to note that the representatives of the railways and their employees supported the views of the disinterested safety experts at that meeting, whereas the truck coterie consistently opposed these experts. When trucking representatives attend one of these meetings with a serious purpose to reduce highway casualties, rather than to secure endorsement for some scheme to increase the permissible size and weight of motor vehicles, that will be news indeed.

What Is a Reportable Injury?

During recent years in which keen rivalry for safety records has developed between railways and between divisions of a railway, the question as to what constitutes a reportable injury has all too frequently been supplanted by that as to ways in which the reporting of accidents can be sidestepped. Yet safety on railroads is so essential to efficient management and to employees that the integrity of accident figures must be maintained.

The interpretation of rules governing monthly reports of railway accidents, compiled by a special committee of the Safety section of the American Railway Association and the Bureau of Statistics of the Interstate Commerce Commission, discussed in the *Railway Age* of June 30, is a proper step to assure that no carrier goes to extremes in an effort to attain a low casualty rate. It defines just what constitute reportable injuries and just what comprises ethical practice in permitting slightly injured men to continue in service and thereby escape the count of an injury.

The need for interpretation is disclosed in the Eleventh Annual Green Book just issued by the National Safety Council, which records the casualty rates of 179 railroads. Of this total, 63 roads had casualty rates (killed and injured per million man-hours) of 6 or less, while 116 had casualty rates ranging from 6 to 43.97. More specifically, 12 roads had casualty rates of less than 2, 21 between 2 and 4, 30 between 4 and 6, 24 between 6 and 8, 24 between 8 and 10, 16 between 10 and 12, 16 between 12 and 14 and 36 over 14. While much of this spread is due to variations in the number of accidents, it results also in part from difference in reporting practices.

Kansas City Terminal Completes Large Mail-Handling Plant

System installed in Union Station, in connection with new post office, expedites the receipt, delivery, sorting-in-transit and forwarding of mail

A MAIL-HANDLING system of considerable magnitude has been completed recently by the Kansas City Terminal to facilitate the sorting and forwarding of the large volume of mail that passes through the Union station at this point. A pronounced increase in the volume of mail handled since the Union station was completed 19 years ago had developed the need for improvement and enlargement of the mail-handling facilities in the station. The betterment project was brought to a head, however, by the construction of a large new city post office almost directly across the street from the station, which pointed to the advantage of developing a plan that would not only expedite mail handling in the station itself, but would also provide a more complete co-ordination of the operation of the post office and the station, insofar as it concerned the receipt, sorting and forwarding of mail.

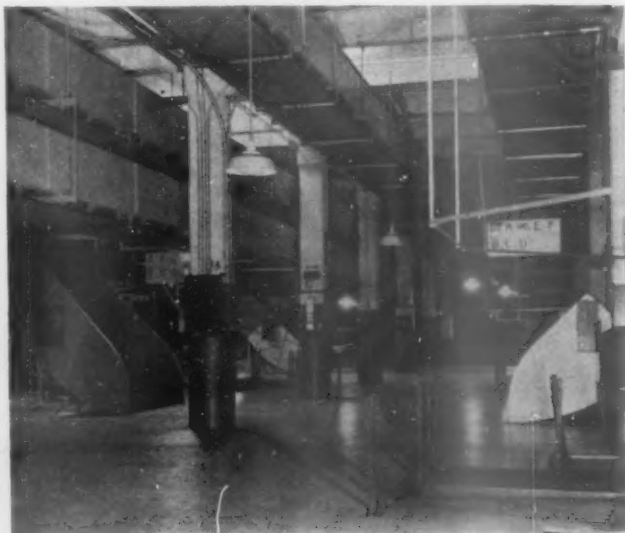
Mail is received from and delivered to the trains of the 12 railways that use this station, and the delivery by means of trucks of outbound mail for departing trains requires that such mail be sorted into 80 secondary separations before it is dispatched. Previous to the completion of the present improvement, relay mail, i. e., pouches received for transfer to other trains without being opened, was moved from trains by the station forces on platform trucks to a separation platform, located in the southeast corner of the sub-basement of the station. This was true also of inbound city mail which was delivered to the tail boards of motor trucks for movement to the old post office at Eighth street and Grand avenue, about a mile from the station. Relay mail, when the time interval between arrival and departure of trains was short, was trucked directly from train to train. Terminal mail, or mail received in sacks and pouches that must be opened for a separation of their contents before being dispatched to other trains, was delivered by platform trucks to the quarters of the Railway Mail Service, located on the track level floor of the station. In addition to the large volume of relay mail, sacks and pouches of outgoing mail were received from the post office, originating in city collections; from three postal sub-stations, located at three large mail order houses; and from the Railway Mail Service. They were handled by station forces with the aid of a small installation of conveyors and truck-loading platforms that facilitated the making of the 80 separations as the platform trucks were loaded for the proper trains.

Maximum Use Made of Belt Conveyors

The new facilities provide for the maximum utilization of belt conveyors in the handling of sacks and pouches, including the deliveries from the station to the post office and vice versa, this movement embracing all of the terminal mail, in addition to all of the inbound and outbound city mail, thus effecting complete co-ordination in the handling of mail in the station with that in the more commodious and fully mechanized quarters in

the new post office into which the Railway Mail Service had been moved.

In the development of this system, advantage was taken of the fact that two tunnels extend transversely, i. e., north and south, under the tracks and platforms near the east and west ends of the station layout, respectively, and connect at their south ends with the sub-basement of the station. As a part of the plan, belt conveyors were installed in these tunnels, and chutes were provided in each of the eight track platforms, so that



Mail is Deposited on the Loading Platforms by Chutes from the Conveyors Overhead

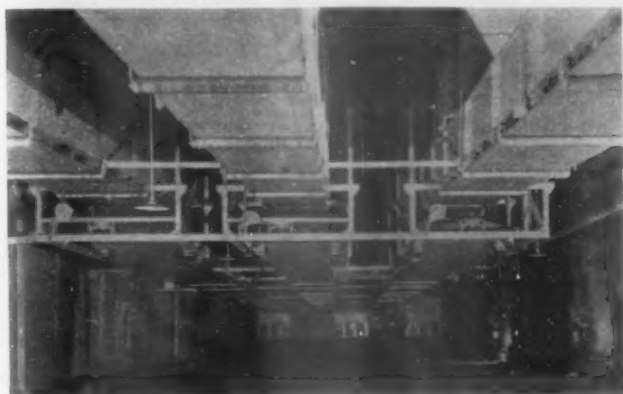
the use of trucks for the handling of inbound mail is now limited to the movement of mail from the cars to the chutes and to short-time transfers from train to train.

However, the development of a plan for the most effective handling of the mail brought out the need for a thorough co-ordination of the separation by the station forces of both the relay mail and the outgoing mail from other sources. Mail from incoming trains requires one of three handlings—direct to the post office for city delivery, direct to the Railway Mail Service quarters in the post office for redistribution and dispatch to out of town points or dispatch to out of town points without redistribution. This requirement was met by providing two systems of conveyors leading directly to the post office and by providing in the conveyor system the necessary facilities for the separation of the sacks, pouches and parcels of both incoming and outgoing mail. This, together with the need for spotting trucks for each of the 80 primary destinations at one time, entailed a material expansion of these former facilities and required much more room than was available in the sub-

basement of the station. Accordingly, the original sub-basement of the station was utilized for a length of 500 ft. to the west under the express building and widened about 65 ft. to the south of the south face of the express building, thereby providing a space about 500 ft. long and 125 ft. in maximum width. Anticipating the development on terminal property, a conveyor tunnel had, about a year earlier, been built to connect the west end of the new sub-basement with the post office.

Conveyors Extend from Station Platforms

By far the greater part of the mail received from trains at Kansas City is unloaded from cars near the west end of the station tracks, that is, tributary to the west tunnel. For this reason, it was deemed advisable to provide a more elaborate installation for the west than for the east tunnel. This tunnel is provided with three conveyors with separate chutes in each platform for each conveyor, so that the station employees may make the primary separations of the inbound mail, i. e., city, terminal and relay mail, by dropping the sacks and pouches into the proper chutes. Two of these conveyors, namely, one for city mail and the other for terminal mail, are continued by means of two east and west conveyors, which are carried overhead in the new sub-basement, to a third flight of conveyors in the



The Three Overhead Conveyors in the West Tunnel

tunnel under Pershing Road to the post office building, with the result that this mail is moved directly from the station platforms to the post office without intermediate handling. The remaining conveyor in this tunnel delivers relay mail to a raised platform, known as the separation platform, at the east end of the mail quarters in the sub-basement, where station employees make six primary separations of the pouches by dropping them into chutes over six conveyors that extend to the west along the length of the new truck-loading platforms. Each of these conveyors drops the sacks and pouches onto a different platform where the necessary secondary separations to destinations are made in loading the trucks spotted around these six platforms.

Similar primary separation of the outgoing city mail assembled from city collections and of outgoing terminal mail for delivery to these six loading platforms, is made at the post office by placing the mail sacks and pouches on any one of six conveyors that carry them through the tunnel from the post office and thence on six east and west conveyors, each one of which drops its burden onto a different loading platform. Outgoing mail from the mail-order houses is received by means of chutes from the driveway level and passes over the



A View of the Separation Platform Showing the Chutes to the Conveyors Below

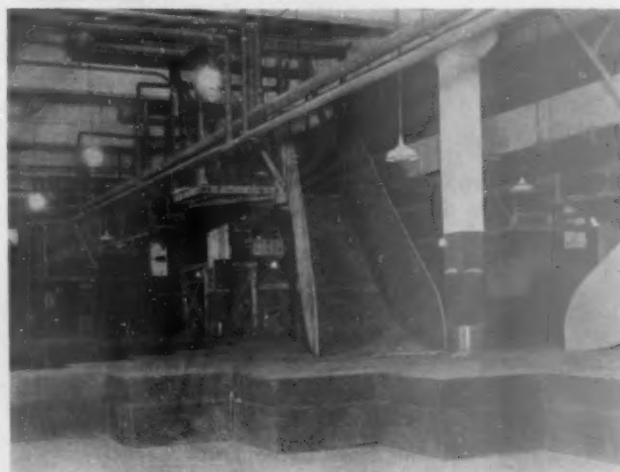
separation platform where it is handled in the same manner as the relay mail.

The facilities provided for the mail received at the east end of the station platforms are not as elaborate as those at the west end. Because only a relatively small part of the mail is handled at that end, and because the far end of the east tunnel is at such a distance, one-fourth mile, from the separation platform, it was concluded that the installation of more than one conveyor was not warranted. Consequently, all mail unloaded at this end of the trainshed is deposited on one conveyor, which delivers it to the separation platform where, in addition to making the six primary separations, as is done with the relay and mail-order mail, the sacks and pouches of city and terminal mail are placed on conveyors that carry these two classes of mail to the post office.

Conveyor connections are also provided at the separation platform by means of which, when desired, mail from the east end may be carried directly to the post office without handling over the separation platform.

Separation and Loading Platforms Heart of Operation

The separation and loading platforms are the heart of the entire operation. The separation platform, which



The Loading Platforms Have a Stepped Outline to Provide a Maximum of Truck Spotting Space

has an area of 90 ft. by 35 ft., with the long axis east and west, is located on the south side of the sub-basement, immediately east of the line of the west tunnel extended. The incoming conveyor from the east tunnel, which passes along its north side and about 5½ ft. above the floor, is provided with four gates and deflectors, by means of which deliveries can be made at four separate points on the platform. Passing along a portion of the west end of the platform, a short north and south conveyor is interposed between the east tunnel conveyor and the east and west conveyor flights leading to the city delivery and railway mail service departments of the post office. It is possible, therefore, to place city mail on the east-tunnel conveyor, which will drop it on the short north and south flight and this in turn will drop its burden on either one of the two conveyors leading to the post office.

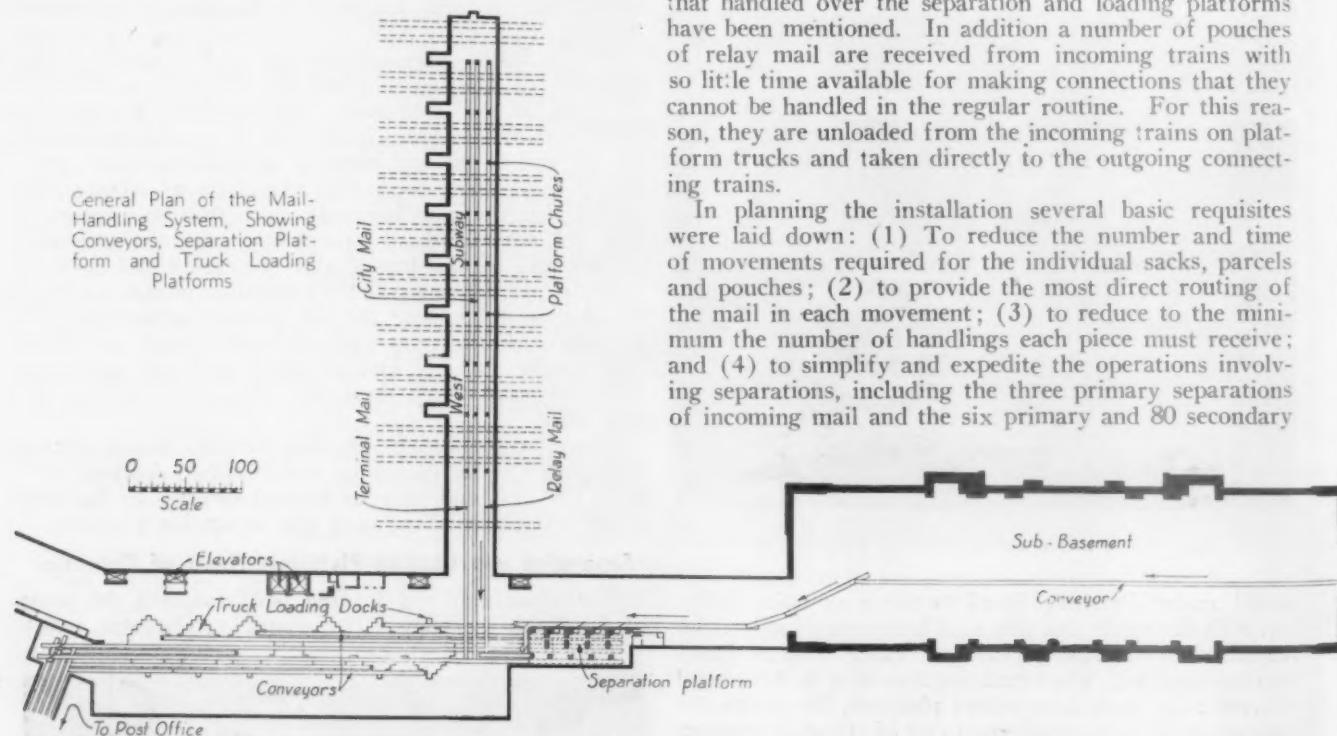
Eight conveyors extend from the separation platform, six to the respective truck-loading platforms and two to the post office, the latter being those that convey the city and terminal mail from the west tunnel to the post office. Because of the length of the platform, 30 chutes conveniently spaced have been provided for dropping the mail onto the conveyor belts. This provision enables

the extended section of the sub-basement. These platforms are roughly diamond shaped, with the long axis north and south, and the sides have a stepped or notched outline in plan to give unobstructed access to the mail trucks. This arrangement also permits the movement of loaded and empty trucks to or from the platform without causing interference with others that are waiting for loads or are in the process of being loaded.

Each platform has room for setting 20 station, or platform, mail trucks at one time, five on each side, or a total capacity for all of the platforms of 120 trucks. During the rush hours every space is occupied, the trucks being removed and replaced with empties as rapidly as they are loaded. At the proper time before trains depart, the loaded trucks are assembled in trains and hauled by tractors to the tunnels where they are placed on elevators and brought to the station platforms. For the convenience of the sorting forces, platforms A, B and C are connected at platform level as are platforms D, E and F. A wide gap is left between these two groups, however, to permit the movement of loaded and empty trucks from and to the south sides of the respective platforms.

Heretofore, only the mail going to the post office and that handled over the separation and loading platforms have been mentioned. In addition a number of pouches of relay mail are received from incoming trains with so little time available for making connections that they cannot be handled in the regular routine. For this reason, they are unloaded from the incoming trains on platform trucks and taken directly to the outgoing connecting trains.

In planning the installation several basic requisites were laid down: (1) To reduce the number and time of movements required for the individual sacks, parcels and pouches; (2) to provide the most direct routing of the mail in each movement; (3) to reduce to the minimum the number of handlings each piece must receive; and (4) to simplify and expedite the operations involving separations, including the three primary separations of incoming mail and the six primary and 80 secondary



the sorters to distribute the sacks and pouches to the respective conveyors with the minimum of walking.

To facilitate the sorting of the mail from the mail order houses received on the primary separation platform by means of chutes from driveway level, as well as to reduce errors in routing them to the loading platforms by dropping them on the wrong conveyor belts, every sack is marked with a separation designation, A to F, respectively, indicating the primary separation group to which it belongs. These markings are in addition to the regular postal-routing labels. As a further safeguard, the chutes are similarly marked to indicate the loading platform to which the conveyor runs.

Loading Platforms Have Large Truck Capacity

Six loading platforms, to correspond with the six groupings of the outgoing mail, have been provided in

separations of outgoing mail, all of which are performed by the station forces, except the six primary separations of outgoing city and terminal mail which are made at the post office.

Conveyors Divided into Independent Systems

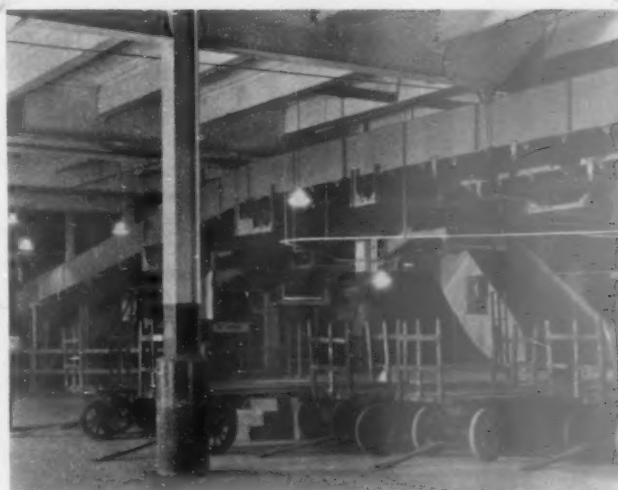
As one means of accomplishing these ends and to keep the lengths of conveyor units within practical operating limits, the conveyor installation is divided into a number of separate systems, each one of which can be operated independently of the others. Through this arrangement also, it is possible at certain hours to reduce the power load, since all movements of the mail are not necessarily made simultaneously. For instance, the post office or the Railway Mail Service may desire to deliver outgoing mail to the loading platforms at a time when there are no incoming trains; or a train may discharge

mail near the east tunnel at a time when there are no westbound trains arriving.

Mechanical Operation Controlled Centrally

East of, but connected with, the separation platform is an office that is used jointly by the foreman of the mail handling forces and the conveyor operator. The latter has full control of the mechanical operation of the conveyors as a whole and of the individual systems of which the installation is composed. He is provided with a control board which contains not only pistol-grip switches for starting and stopping the various units, but also indicators that show by means of colored lights the units that are in operation. In addition to the control over the conveyors maintained by the operator, emergency switches are located at a number of convenient points by which any individual conveyor or system can be stopped in case of trouble. After this is cleared up, however, the conveyors can be started again only by suitable action on the part of the control operator and the man at the emergency switches.

In the routine operation of the several systems of conveyors, there is always the possibility that any conveyor belt will become overloaded, or that there will



Trucks Spotted at One of the Loading Platforms

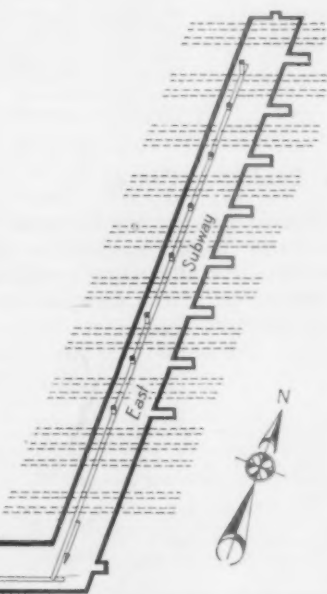
at other times only one or two systems are required. In the station layout, this is controlled by the control board operator. The switches controlling the conveyors leading to the post office are, however, located in the post office. To avoid the possibility that interdependent conveyors in the station or in the tunnel to the post office will be thrown into operation while the others to which they deliver are shut down and of thus dumping an accumulation of mail on conveyors that are not in operation, an interlocking relay system has been installed through which no system can be started unless the system which is to receive the mail is set clear for operation. The interlocking devices also provide a short time interval for supplying electrical energy to the successive motors in a system thus avoiding an excessive demand for starting current.

Conveyors Equipped with Automatic Takeups

The successful operation of belt conveyors requires each belt to be subjected to a predetermined constant slack-side tension. This tension must be sufficient to prevent slippage of the belt over the drive pulley when starting under full load conditions. Five of the automatic take-ups are of the vertical type and the others are of the horizontal type. The vertical type consists of a solid pulley of sufficient weight to produce the required slack-side tension in the belt. Vertical take-up pulleys travel between vertical steel guides. Horizontal take-ups consist of a standard pulley mounted on a carriage equipped with flanged wheels which in turn travel on steel tracks. A cable, passing over a system of sheaves, is secured at one end to the carriage and at the other end to sectional counterweights having sufficient total weight to produce the required tension in the slack side of the belt.

These take-ups perform the further important functions of automatically adjusting variations in belt length due to normal elongation or contraction or to variations of belt stresses with the accompanying changes of belt length of the carrying run under load fluctuations and simultaneously maintaining the predetermined slack side belt tension.

As an indication of the magnitude of the installation, and incidentally of the mail-handling operation as well, 15,000 lin. ft. of conveyor belt was required to equip the various systems. Twenty-nine driving motors averaging 20 hp. were required to drive the various units comprising the railway's part of the installation. The incoming 3 phase, 60 cycle a-c. power is delivered at



be congestion on it, although the speed of operation is sufficient to keep the mail moving away from the chutes as rapidly as it can be handled by the sorting forces. Automatic devices have been provided to stop an overloaded belt or clogged deflector and to prevent injury to the conveyor equipment in case of overload. Every system consists, however, of several individual belts, either because the run itself is short, because it is too long for a single belt and is, therefore, divided into several shorter belts of practical operating length; or because it is necessary to change the direction of movement.

Operation Protected by Interlocking Device

To avoid the chance of an accumulation of mail at any of these breaks in the full run, the electrical connections are so arranged that the closing of one operating switch for any system starts, with time delay sequence, all of the belts in that system. Likewise, when the switch is opened, all of the belts are stopped simultaneously. There are certain periods during the day when it is not necessary to operate any of the conveyors;

the sub-station at 2,300 volts, but is stepped down to an operating voltage of 440 for the motors and 110 for the lighting circuits. A complete sub-station, including transformers, switch board and other incidental equipment, was installed in the sub-basement to care for the operation of the plant.

By the installation of the conveyor system the Terminal company eliminated the necessity for an expensive layout of switch tracks to the new post office, and the expense of maintenance and operation incident thereto. This layout would have involved expensive building alterations in addition to a large subway for carrying the tracks under Pershing road. In the absence of a conveyor system, such a layout would have been required for the setting out of head ends for unloading and the setting in of head ends for advance loading, at an added switching expense of at least \$30,000 a year.

Plans for the installation and operation of the entire system, including that part leading through the tunnel to the post office were developed by P. J. Watson, Jr., then general superintendent and now president and general manager of the Kansas City Terminal. Detailed designs, specifications and working drawings of the conveyors were prepared by John W. Schaffner, designing engineer, under the supervision of John V. Hanna, chief engineer. Plans for and construction of the building work were handled by the company's regular engineering staff; and the construction of the conveyors by Mr. Schaffner, assisted by R. M. Kerr, assistant engineer.

Freight Car Loading

WASHINGTON, D. C.

REVENUE freight car loading in the week ended July 21 again fell below the figures for the corresponding week of last year. The total was 614,864 cars, an increase of 12,086 cars as compared with the week before but a decrease of 41,516 cars as compared with 1933. It was, however, an increase of 112,952 cars compared with the corresponding week in 1932. Live stock loading, because of drought conditions, showed an increase both as compared with the week before and as

compared with last year and all other commodity classifications except ore and miscellaneous showed increases as compared with the week before, but all except ore and live stock showed reductions as compared with last year. The summary as compiled by the Car Service Division of the American Railway Association, follows:

Revenue Freight Car Loading

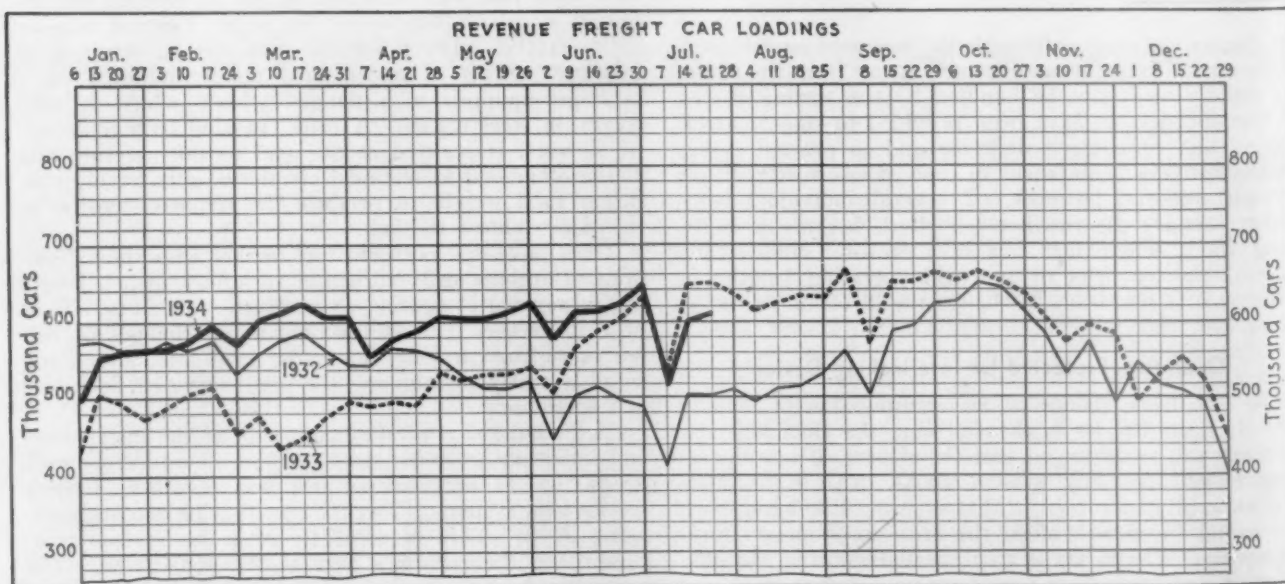
Week Ended Saturday, July 21, 1934

Districts	1934	1933	1932
Eastern	132,557	148,228	113,460
Allegheny	116,460	134,791	94,791
Pocahontas	40,783	47,673	32,643
Southern	80,669	90,734	71,170
Northwestern	95,417	92,983	60,367
Central Western	98,954	92,740	85,905
Southwestern	50,024	49,231	43,576
Total Western Districts	244,395	234,954	189,848
Total All Roads	614,864	656,380	501,912
Commodities			
Grain and Grain Products	47,138	49,184	41,186
Live Stock	26,207	15,663	14,195
Coal	96,816	118,250	76,708
Coke	4,502	6,514	2,471
Forest Products	22,059	29,206	15,649
Ore	32,496	28,007	6,622
Merchandise, L.C.L.	158,592	172,019	167,496
Miscellaneous	227,054	237,537	177,585
July 21	614,864	656,380	501,912
July 14	602,778	653,661	503,761
July 7	519,807	543,510	415,928
June 30	644,572	641,730	488,281
June 23	621,872	609,627	498,993
Cumulative total, 29 weeks	17,137,780	15,197,851	15,529,421

Car Loading in Canada

Car loadings in Canada for the week ended July 21 totaled 44,751, a decrease from the previous week of 638 cars but an increase over the corresponding week last year of 5,762, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
July 21, 1934.....	44,751	19,645
July 14, 1934.....	45,389	20,033
July 7, 1934.....	39,947	18,785
July 22, 1933.....	38,989	19,977
Cumulative Totals for Canada:		
July 21, 1934.....	1,224,540	660,553
July 22, 1933.....	1,019,981	518,465
July 23, 1932.....	1,190,411	574,556



Damage from Sweating of Steel Car Roofs

Progress report of investigation by A. R. A. committee shows tested methods for overcoming trouble do not give protection of "hot" lading—
Work being continued

THE purpose of the investigation, which was conducted under the direction of a sub-committee of the Committee on Car Construction of the Mechanical Division, was to study the subject of sweating of steel car roofs of freight cars with its resulting damage to lading. It was decided that four cars of identical construction, except for interior roof finish, would be used in these tests. It was also decided that the four cars would be loaded with the same commodity at the same point and at the same time, that they would be moved in the same train to the same destination and be unloaded at the same time, thus undergoing the same weather conditions.

Test Cars

Four Pennsylvania type X-29, 100,000 lb. capacity all-steel box cars, which were built approximately one year ago were selected. All steel surfaces of the cars were painted in the original construction and retained the original coating. In all cases the roof was calked with black plastic cement at the joint with the top Z-bar. The sides and ends of the cars were lined with 1 $\frac{3}{16}$ -in. wood from floor to steel side plates and end plates. The cars which were prepared for tests are as follows:

Car No.	Ceiling
100176	Plain painted steel.
100237	Repainted and sprayed wet with ground cork.
100016	One-half of car (A end) protected with Johns-Manville insulating board and remainder protected with Insulite board.
100285	Lined with pine $\frac{3}{4}$ -in. by $\frac{3}{4}$ -in. tongued and grooved, dressed on one side with the rough side down.

The insulating board applied to the ceiling of the third car was cemented directly to the underside of the steel roof sheets, while the wood lining in the fourth car was installed so that there was an air space of approximately $\frac{3}{4}$ in. between the wood lining and the roof sheets. In both cars the interior roof framing was entirely covered, but the side and end plates were left exposed in all four cars. The general condition of these cars would meet all the rigid requirements of shippers of flour, cereals, or other high-class commodities. They were practically dust- and weather-proof.

Test Program

The test program consisted of three shipments of four cars each of Quaker Oats Company products from Cedar Rapids, Iowa, to Salt Lake City, Utah, and also three shipments of four cars each of flour from the Pillsbury Milling Company at Minneapolis, Minn., to Springfield, Ill.

Of the Quaker Oats Company shipments the first two contained "hot" lading and the third consisted of pre-cooled products. The cubic space occupied by the load in the car was approximately the same in all three shipments. The loading dates were January 18, January 30 and February 16. Unloading dates were about five days later.

All three shipments by the Pillsbury Milling Company

consisted of "hot" lading. The cubic space occupied by the load in the first two shipments was not as uniform as those made by the Quaker Oats Company. The loading dates were March 9, March 21 and April 5. The unloading dates were four or five days later.

The Quaker Oats Shipments

The finished product comes hot from the rolls to the packing machine where it is pressed into square or cylindrical fibre board packages holding 55 oz. net. After being sealed twelve or eighteen packages are placed in a fibre board shipping container lined with corrugated fibre board which is immediately sealed so that the only means of heat release is through the walls of the container. The temperature of the oats when packed was from 120 to 138 deg. F., the packing-room temperature 70 to 75 deg. F., and the room humidity 25 to 30 per cent. The temperature of the cars into which the first shipment was loaded was from 39 to 48 deg. F., and in the second shipment, from 26 to 38 deg. F. In the first shipment each car was loaded with 1,300 cases of rolled oats weighing 46,900 lb. In the second shipment the cars were loaded with 1,150 cases each.

In preparing the cars for shipment they were cleaned by compressed air, floors covered with a single course of manilla paper and door posts covered with numerous thicknesses of manilla paper. A board gate was provided for the doorway and it was covered with two or more thicknesses of wrapping paper.

In the first shipment the outside temperature when leaving Cedar Rapids was 29 deg. F. and temperature en route ranged up to 54 and down to 16 deg. F. Rain was encountered in the latter part of the trip. For the second shipment the outside temperature when leaving was 26 deg. F. and temperature en route ranged up to 54 and down to 32 deg. F.

The third shipment was pre-cooled by being left stacked on the loading platform for from 42 to 90 hours. The car temperature at loading ranged from 26 to 50 deg. F. and en route from 48 to 20 deg. F., with some rain and snow.

The Flour Shipments

Flour shipments were confined to the use of cotton sacks holding 98 lb. each. The flour comes hot (about 90 deg. F.) from the rolls to the sacks. After being filled the sacks of flour are carried by conveyors to the car, loading requiring not over one hour per car. Two thicknesses of paper were used to protect the sacks of flour from floor, sides and ends of the car. The paper covering extended also over the top of the load.

When the first shipment of flour was made the temperature of the empty cars ranged from 8 to 22 deg. F. Three of the cars were loaded with 500 sacks each and the fourth car—the one having insulating board on the ceiling—with 900 sacks. The cars were sealed as soon

as loaded, but did not leave Minneapolis until 30 hours after. By the time the cars were loaded water was dripping and frost was forming over the doorway and at other points.

In the second shipment three of the cars were loaded with 410 sacks each and the fourth car—with ground cork sprayed on the ceiling—with 560 sacks. Temperature of cars when loaded ranged from 33 to 45 deg. F. These cars were again held in the yards for about 30 hours, when temperature fell to 6 deg. F. While in transit the temperature ranged from 20 to 36 deg. F.

In the third shipment each car was loaded with 900 sacks. Temperature of cars before loading was from 42 to 45 deg. F. During loading water formed and dripped to the floor at doorways until paper awnings were applied. Temperature in transit ranged from 32 to 50 deg. F.

At the conclusion of the tests water was sprayed against the sides of the cars with a fire hose at approximately 25 lb. pressure. Leakage was considerable, particularly at joint between roof and side plate, and ran down the side sheets inside.

Extent of Moisture Damage

The tentative report gives detailed information of condition of shipments when unloaded, location of damaged cases or sacks and other pertinent data. A

sheathed, Murphy steel ends, wood-lined floor to ceiling, and Hutchins steel roofs, underside not protected. The Illinois Central cars had steel super-frame, single wood sheathed, Hutchins steel roof, unlined, steel ends unlined. The Chicago, Rock Island & Pacific cars were single wood sheathed, lined to roof on sides and ends,

Summary of Moisture Damage in Other Shipments of Quaker Oats Products

Car owners	Lading		Total	
	Wet		Dry	
	Cars	Cases damaged	Cars	Cases damaged
A. T. & S. F.	13	170	22	35
C. B. & Q.	7	28	30	37
C. & S.	1	16	4	5
I. C.	7	332	11	18
C. R. I. & P.	6	98	33	39
Totals	34	644*	100	134

* Represents 64 per cent of one car load, 0.5 per cent of total. Estimated loss, \$500.

steel roof underside unprotected. In addition there was one C.R.I. & P. car which was double sheathed (wood), wood frame, steel roof, underside not protected. In this car there was no damage to the shipment.

Summary

Damage due to moisture in the three shipments of Quaker Oats products was 2.0 per cent of the car with

General Summary of Test Shipments and Moisture Damage to Lading

CAR NUMBER AND TYPE OF CEILING	First Shipment			Second Shipment			Third Shipment			Total—All Shipments		
	No. of cases or sacks damaged	No. of cases or sacks in load	Per cent cases or sacks damaged	No. of cases or sacks damaged	No. of cases or sacks in load	Per cent cases or sacks damaged	No. of cases or sacks damaged	No. of cases or sacks in load	Per cent cases or sacks damaged	No. of cases or sacks damaged	No. of cases or sacks in load	Per cent cases or sacks damaged
Shipments of Quaker Oats Products—Cedar Rapids to Salt Lake City												
"Hot" lading												
P. R. R. No. 100176..... (Painted steel ceiling)	47	1,300	3.6	22	1,150	1.9	None	1,000	0.0	69	3,450	2.00
P. R. R. No. 100237..... (Ceiling covered with ground cork)	29	1,300	2.2	None	1,150	0.0	1	1,000	0.1	30	3,450	0.87
P. R. R. No. 100016..... (Ceiling covered with insulating board)	3	1,300	0.2	12	1,150	1.0	3	1,000	0.3	18	3,450	0.52
P. R. R. No. 100285..... (Wood lined ceiling)	2	1,300	0.15	None	1,150	0.0	None	1,000	0.0	2	3,450	0.06
Total	81	5,200	1.5	34	4,600	0.7	4	4,000	0.1	119	13,800	0.86
Shipments of Pillsbury Flour—Minneapolis, Minn., to Springfield, Ill.												
"Hot" lading												
P. R. R. No. 100176..... (Painted steel ceiling)	10	500	2.0	18	410	4.5	27	900	3.0	55	1,810	3.0
P. R. R. No. 100237..... (Ceiling covered with ground cork)	16	500	3.2	74	560	13.2	22	900	2.4	112	1,960	5.7
P. R. R. No. 100016..... (Ceiling covered with insulating board)	7	900	0.78	None	410	0.0	1	900	0.1	8	2,210	0.36
P. R. R. No. 100285..... (Wood lined ceiling)	5	500	1.0	1	410	0.2	None	900	0.0	6	1,810	0.33
Total	38	2,400	1.6	93	1,790	5.2	50	3,600	1.4	181	7,790	2.32

general summary of the damage found is given in the accompanying table.

Other Shipments of Quaker Oats

A record was made of the damage from moisture to all other "hot" shipments of Quaker Oats products from Cedar Rapids, Iowa, to Salt Lake City, Utah, between December 1, 1933, and February 2, 1934. Details are given in Appendix A of the report and a general summary in the accompanying table.

These shipments were made in cars owned by five roads. The Atchison, Topeka & Santa Fe cars were of steel construction, single wood sheathed, steel ends, steel roofs (not lined), and ends lined from floor to end plate. The Chicago, Burlington & Quincy cars were steel frame, single sheathed, Hutchins ventilated steel roofs, unlined. The Colorado & Southern cars were single-

lined, Murphy steel ends, wood-lined floor to ceiling, and Hutchins steel roofs, underside not protected. The Illinois Central cars had steel super-frame, single wood sheathed, Hutchins steel roof, unlined, steel ends unlined. The Chicago, Rock Island & Pacific cars were single wood sheathed, lined to roof on sides and ends,

Damage due to moisture in the three shipments of Pillsbury flour was 3.0 per cent for car with painted steel ceiling, 5.7 per cent for car with ceiling covered with ground cork, 0.36 per cent for car with ceiling covered with insulating board, and 0.33 per cent for car with wood ceiling.

Precooling of third shipment of Quaker Oats products practically eliminated damage due to moisture in all test cars regardless of type of ceiling used. In shipments of "hot" lading from the Quaker Oats plant there were 84 cases and 34 cases damaged due to moisture in the first and second shipments, respectively, compared to

(Continued on page 153)

U. S. May Take Over Railroad Pension Plans

Discretion left with railroad retirement board which may assess extra cost against companies

WASHINGTON, D. C.

THE new railroad retirement act, which became effective on August 1, to be administered by the Railroad Retirement Board appointed by the President, has created a situation of considerable uncertainty as to its exact effect on the 84 voluntary pension systems of the railroads, the Pullman Company, and the Railway Express Agency. It is evident that the present plans will be discontinued as to future retirements, unless the railroads are successful in their plans to seek an injunction to restrain the operation of the new law, but the extent to which the companies will be relieved of the expense of their present obligations under their plans, which amounted to \$34,000,000 last year and which it is estimated would aggregate \$300,000,000 if the present pensions were to be paid to termination, is left somewhat uncertain by the terms of the act.

The existing plans have been supported entirely by the companies themselves without contributions from the employees, such as are provided for in the government plan. The new plan calls for contributions by the employees, to be deducted from their wages, of 2 per cent (until the board shall determine on a different percentage) of their compensation (excluding that in excess of \$300 a month), or approximately \$33,000,000 a year on the basis of present payrolls, and contributions of double the amount of the employees' contribution from the railroads, or approximately \$66,000,000 a year. This makes a total of some \$99,000,000 to be administered by the board, for pensions and its expenses.

However, the new government board is given the power, without being specifically required, to take over the obligations of the existing plans by substituting for them the provisions of the law, assessing the extra cost involved upon the railroads in addition to the contributions specifically required by the law. Or, failing to make satisfactory arrangements with any carrier for such substitution, the board may administer the new law without regard to the operation of the company plans, or it may apply the benefits of the new law to retired employees whether or not they are receiving pensions.

The carriers will therefore probably be called upon to continue at least part of their present pension payments in addition to the \$66,000,000 contribution and the Pennsylvania has announced its intention of making allowances on the present basis to employees retired during the six-months period before any pensions will be payable under the government plan.

An offsetting factor is created by the fact that as a result of the new law the pension payments required by the existing plans would soon begin to decrease, by reason of deaths among the pensioners, instead of increasing annually as more men are retired; but on the other hand the cost of the operation of the new plan will tend to increase from year to year.

Proponents of the legislation at the hearings before Congressional committees argued that the railroads would be entirely relieved of their present growing pen-

sion liability and that it should be subtracted from the amount of the new contributions to show the amount of the new cost, but as the bill was passed the matter was left largely discretionary with the board and dependent to some extent upon the demands made on its fund.

84 Existing Plans

Pensions are no new thing for the railroads, as illustrated by the fact that formal pension plans have been established on 51 railways or systems, including the Pullman Company and the express company, the earliest, that of the Baltimore & Ohio, dating from 1883, fifty years ago, and the latest from 1929. Informal pension plans exist on 23 railways or systems ranging as to year of inauguration from 1890 to 1929. What are characterized as "indefinite" plans also exist on 10 railways or systems, which have granted pensions or specified amounts to employees as and when they retire from service, each case usually being handled on its merits. The 82 railways operate some 207,000 miles of line and 90 per cent of the employees of all Class I roads, the Pullman Company and the Express Agency have been covered by some pension plan. Total pension payments in 1933 aggregated \$34,244,000 and the total pension payments from the beginning date of each plan to the end of 1933 amounted to \$339,693,000.

The new law was passed, not because the railroads generally had failed to provide retirement benefits, although some large roads had not done so, but because the employees and their organizations were dissatisfied with pension systems lacking in uniformity and based upon voluntary gifts by the companies rather than on an enforceable right of the employees. They also wanted more liberal pensions than were being paid by most railroads. The bills introduced in Congress at the request of the employees' organizations, which were the basis for the new legislation, originally called for pension payments of approximately twice the amount usually paid by the railroads although the amount of the annuities was somewhat reduced in the bill which finally became law. Another motive also entered into the preparation of these bills on behalf of the organizations, one of the purposes being to provide, by lowering the retirement age, for the immediate retirement of a large number of the older employees—some of the witnesses placed the number as high as 100,000—in order to increase the opportunities for employment for younger men.

Some of the railroads had indicated previously a desire to improve their pension systems by placing them on a basis which would accumulate reserves at compound interest in anticipation of future pension payments instead of merely charging pension payments to operating expenses as they were made. As a part of the agreement made by the railroads with the labor organizations in January, 1932, when the 10 per cent deduction from wages was made, the Association of Railway Executives

Character of Class I Steam Roads in the United States, The Pullman

Company	Date plan inaugurated	Funds provided	Are current pension payments made from current earnings	Is pension liability funded or unfunded	Character of pensions provided for				Years of service required to become eligible	
					a/c age	a/c disability	a/c service	Is retirement at specified age compulsory	a/c age	a/c disability
FORMAL PLANS:										
Atchafalaya, Topoka & Santa Fe Sys.	Jan. 1, 1907	100% Ry.	Yes	Not funded	Yes	Yes	-	No	15 - age 65	15
Atlantic Coast Line R.R.	Feb. 1904	100% Ry.	Yes	"	Yes	Yes	No	Yes - age 70	10 - age 70	10 over, 20 under age 61
Baltimore & Ohio R.R.	Oct. 1, 1884	100% Ry.	Yes	Not funded	Yes	Yes	-	No	35 - age 65	10 - age 65
Bessemer & Lake Erie RR. &	Jan. 1, 1911	100% Ry.	"	"	Yes	Yes	Yes	Yes - men 70 Yes - women 60	25	25
Buffalo, Rochester & Pittsburgh Ry.	July 1, 1903	100% Ry.	Yes	Not funded	Yes	Yes	-	Yes - age 70	20 - ages 65 to 70	20 - ages 60 to 65 &
Canadian National Lines in New England	Jan. 1, 1908	100% Ry.	Yes	Not funded	Yes	Yes	-	Yes - age 65	15	20
Canadian Pacific Ry. (Lines in Mo.)	Jan. 1, 1903	100% Ry.	Major part - some funds invested	Yes	Yes	-	-	Yes - age 65	25 &	Based on merit
Canadian Pacific Ry. (Lines in Vt.)	Jan. 1, 1903	100% Ry.	Major part - some funds invested	Yes	Yes	-	-	Yes - age 65	25 &	Based on merit
Central of Georgia Ry.	July 1, 1917	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	25	25 &
Chicago & North Western Ry.	Jan. 1, 1901	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	20 h	20 h
Chicago, Burlington & Quincy R.R.	Jan. 1, 1922	100% Ry.	Yes	"	Yes	Yes	No	Yes - age 70	20 - ages 65 to 70	25
Chgo., Rock Island & Pac. (Inc. CRIAC)	Jan. 1, 1910	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	20	25
Chgo., St. Paul, Minn. & Omaha Ry.	Apr. 1, 1906	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	20	20
Colorado & Southern Ry.	Apr. 1, 1922	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	20 - ages 65 to 70	25
Delaware & Hudson R.R. Corp.	Dec. 1, 1908	100% Ry.	Yes	Not funded	Yes	Yes	-	No	at age 70	25 - age 65 &
Delaware, Lackawanna & Western R.R.	June 1, 1902	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	25	25
Denver & Rio Grande Western R.R.	July 1, 1917	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	20	25
Duluth, Missabe & Northern Ry. &	Jan. 1, 1911	100% Ry.	Yes	&	Yes	Yes	Yes	Yes - age 70	25	25
Duluth, Winnipeg & Pacific Ry.	Jan. 1, 1908	100% Ry.	Yes	Not funded	Yes	Yes	-	Yes - age 65	15	20
Elgin, Joliet & Eastern Ry. &	Jan. 1, 1911	100% Ry.	"	"	Yes	Yes	Yes	Yes - men 70 Yes - women 60	25	25
Florida East Coast Ry.	July 1, 1916	100% Ry.	Yes	"	Yes	Yes	No	Yes - age 70	10	10
Fort Worth & Denver City Ry.	Apr. 1, 1922	100% Ry.	Yes	"	Yes	Yes	No	Yes - age 70	20	25
Grand Trunk Western R.R.	Jan. 1, 1908	100% Ry.	Yes	Not funded	Yes	Yes	-	Yes - age 65	15	20
Great Northern Ry.	Sept. 16, 1916	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	20 h	25 h
Gulf Coast Lines	Nov. 1, 1926	100% Ry.	Yes	Not funded	Yes	Yes	-	Yes - age 70	25	25
Illinois Central System	July 1, 1901	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	25 - at age 70	25
International Great Northern RR	Nov. 1, 1926	100% Ry.	Yes	Not funded	Yes	Yes	-	Yes - age 70	25	25
Lake Superior & Ishpeming R.R.	Jan. 1, 1920	100% Ry.	Yes	Not funded	Yes	Yes	Yes	Yes - age 70	25 - at age 70	25 - ages 60 to 69
Minneapolis, St. Paul & S. S. Marie Ry.	July 1, 1910	100% Ry.	Yes	"	Yes	Yes	No	Yes - age 70	15 - at age 65	15
Missouri-Illinois RR	Jan. 1, 1915	100% Ry.	Yes	"	Yes	Yes	-	Yes - age 70	25	25
Missouri Pacific R.R.	July 1, 1917	100% Ry.	Yes	Not funded	Yes	Yes	-	Yes - age 70	25	25
Nashville, Chattanooga & St. Louis Ry.	May 1, 1914	100% Ry.	Yes	Not funded	No	Yes	No	No	-	10 over, 20 under age 61
New York Central Lines	Jan. 1, 1910	100% Ry.	Yes	Not funded	Yes	Yes	Yes	Yes - age 70	15	20
N.Y.C. & St. L. (Nickel Plate Dist.)	Jan. 1, 1914	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	10 - at age 70	20
Norfolk & Western Ry.	July 1, 1917	100% Ry.	Yes	Trust fund established	Yes	Yes	Yes	Yes - age 70	- at age 70	20
Northern Pacific Ry.	May 1, 1922	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	20	20 - ages 61 to 65
Northwestern Pacific R.R.	Sept. 1, 1912	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	20	25 - otherwise
Pennsylvania R.R. System	Jan. 1, 1900	100% Ry.	Yes	Not funded	Yes	Yes	-	Yes - age 70	at age 70	30 - incapacity - ages 61-70
Pullman Company	Jan. 1, 1914	100% Co.	Yes	Not funded	Yes	Yes	No	Yes - men 70 Yes - women 65	20	30 - ages 65 to 69
Railway Express Agency, Inc.	Nov. 1, 1922	100% Co.	Yes	Not funded	Yes	Yes	Yes	Yes - age 70	20	20 - at age 45 or over
Reading System	Dec. 17, 1902	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	25 - at age 70	30
Richmond, Fredericksburg & Potomac R.R.	Jan. 1, 1924	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	35 - at age 65	25
St. Joseph & Grand Island Ry.	Jan. 1, 1921	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	20	20 - women - 25 - men
St. Louis-San Francisco Lines	July 1, 1913	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	15	20 - incapacity - ages 61-70
Southern Pacific Lines	Jan. 1, 1903	100% Ry.	Yes	Not funded	Yes	Yes	-	Yes - age 70	20 - ages 65 to 70	20 - women - 25 - men
Spokane, Portland & Seattle Ry.	Sept. 1, 1926	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	20	20 - incapacity - ages 61-70
Staten Island Rapid Transit Ry.	Oct. 31, 1917	100% Ry.	Yes	Not funded	Yes	Yes	-	No	35 - at age 65	25 - otherwise
Texas & Pacific Ry.	Apr. 1, 1925	100% Ry.	Yes	Not funded	Yes	Yes	No	No	25 - ages 65 to 70	10 - at age 65
Union Pacific System	Jan. 1, 1903	100% Ry.	Yes	Not funded	Yes	Yes	No	Yes - age 70	20	20 - women - 25 - men
Western Maryland Ry.	Jan. 1, 1916	100% Ry.	Yes	Not funded	Yes	Yes	No	No	20 - at age 65	20 - incapacity - ages 61-70
Wichita Valley Ry.	Apr. 1, 1922	100% Ry.	Yes	"	Yes	Yes	No	Yes - age 70	20 - ages 65 to 70	Individual consideration
INFORMAL PLANS:										
Ash Grove R.R.	Aug. 1924	100% Ry.	Yes	Not funded	No	Yes	No	No	-	25
Boston & Maine R.R.	Oct. 1, 1901	100% Ry.	Yes	"	No	Yes	No	"	-	30
Central R.R. Co. of New Jersey	Jan. 1, 1903	100% Ry.	Yes	Not funded	Yes	Yes	No	No	30	30 (except in case accident)
Central Vermont Ry. Inc.	Jan. 1, 1925	100% Ry.	Yes	Not funded	Yes	Yes	-	No	15	15
Chesapeake & Ohio Ry.	"	100% Ry.	Yes	Not funded	Yes	Yes	No	No	20	25
Chicago & Eastern Illinois Ry.	"	100% Ry.	Yes	Not funded	No	No	Yes	No	-	-
Detroit & Mackinac Ry.	Mar. 1910	100% Ry.	Yes	Not funded	Yes	Yes	-	No	30	30
Detroit & Toledo Shore R.R.	July 1, 1922	100% Ry.	Yes	Not funded	Yes	Yes	No	No	No fixed rule	No fixed rule
Erie R.R. System	June 24, 1927	100% Ry.	Yes	Not funded	Yes	Yes	-	Yes - age 70	at age 70	20 (over age 45)
Georgia & Florida R.R.	Mar. 21, 1924	100% Ry.	Yes	Not funded	Yes	Yes	-	No	-	(a/c injury)
Kansas City Southern Ry. (Inc. T&P)	1920	100% Ry.	Yes	Not funded	Yes	Yes	No	No	No definite restriction as to length of	*
Lehigh Valley R.R.	" (1907)	100% Ry.	Yes	Not funded	Yes	"	-	No	30 - at age 65	"
Louisville & Nashville R.R.	1901	100% Ry.	Yes	Not funded	No	No	-	No	-	15
Maine Central R.R.	Feb. 1, 1902	100% Ry.	Yes	Not funded	No	Yes	No	No	-	20
Michigan-Kansas-Texas Lines	Jan. 1, 1918	100% Ry.	Yes	Not funded	No	Yes	No	No	-	20
N.Y.C. & St. L. (L&N Dist. - Clover Leaf Dist.)	May 1, 1925	100% Ry.	Yes	Not funded	No	Yes	No	No	-	20 (when incapacitated)
New York, New Haven & Hartford R.R.	1890	100% Ry.	Yes	Not funded	No	Yes	No	No	-	30
New York, Ontario & Western Ry.	Nov. 1915	100% Ry.	Yes	Not funded	Yes	Yes	-	No	30 (On Merits)	On Merits
Pere Marquette Ry.	July 1, 1925	100% Ry.	Yes	Not funded	No	Yes	No	No	-	20 (totally disabled)
St. Louis Southwestern Lines	Jan. 1, 1915	100% Ry.	Yes	Not funded	Yes	Yes	Yes	No	-	No regular requirements
Seaboard Air Line Ry.	"	100% Ry.	Yes	Not funded	No	Yes	No	No	-	25
Texas Mexican Ry.	Oct. 29, 1929	100% Ry.	Yes	Not funded	Yes	Yes	Yes	No	-	No limitations - each case acted on by
Wabash Ry.	Dec. 1, 1915	100% Ry.	Yes	Not funded	No	Yes	No	No	-	25
INDEFINITE PLANS:										
Alton R.R.	"	"	"	"	Pay a few gratuities to men who have been in the employ of the Company for many years, when the management has since about 1915 voluntarily granted to employees of advanced age with deserving employees who have become unfit for service account age or disability are great. Makes a few grants. Each case handled strictly on its merits; neither age, nor length of service, nor any other factor is given separate and individual consideration. No regular requirements range from \$15.00 to \$75.00 per month - but no specified amounts established. Make payments each month to a few retired employees.					
Atlanta & West Point (Incl. W. Ry. of Ala.)	About 1915	100% Ry.	Yes	Not funded						
Banger & Arcostock R.R.	About 1918	100% Ry.	Yes	"						
Chicago, Indianapolis & Louisville Ry.	"	100% Ry.	Yes	"						
Georgia R.R.	1914	100% Ry.	Yes	Not funded						
Illinois Terminal R.R. System	"	100% Ry.	Yes	Not funded						
Lehigh & Hudson River Ry.	"	"	"	"						
Lehigh & New England R.R.	"	"	"	"						
Minneapolis & St. Louis R.R.	"	"	"	"						
Toledo, Peoria & Western R.R.	"	"	"	"						

* Not reported. ^a 1% on first \$50.00 and 1/2% on excess of highest average salary. In exceptional cases of long and unbroken service with first class records payment may be increased. ^b Covered through the United States Steel and Carnegie Pension Fund. This fund, according to the report of the Duluth, Missabe & Northern Ry. is a fund of \$12,000,000, established by the company in 1901, and is now being used to pay pensions to employees who have become disabled or retired. ^c Employees who have reached age 65 can be pensioned on account of disability regardless of length of service, except under special circumstances to be approved by the committee. ^d On disability applications, 15 years service is considered for meritorious service, such as loyalty during strikes, fire or other emergencies, or in special cases regardless of age. ^e Employees who have reached age 65 can be pensioned on account of disability regardless of length of service, except under special circumstances to be approved by the committee. ^f On disability applications, 15 years service is considered for meritorious service, such as loyalty during strikes, fire or other emergencies, or in special cases regardless of age. ^g Employees who have reached age 65 can be 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Pension Plans

Company, and the Railway Express Agency, Inc.

Age for pensions	Method of arriving at monthly earnings for use in computing pension	Percentage allowed in pension for each year of service	Maximum and/or minimum pension allowance per month		Company
			Maximum	Minimum	
25 - men age 65 25 - women age 55	Highest average monthly pay during any consecutive 10 years of service	15	\$75.00	\$20.00	FORMAL PLANS: Atchafalaya, Tappan & Santa Fe Sys. Atlantic Coast Line R.R. Baltimore & Ohio R.R. Bessemer & Lake Erie RR. & Buffalo, Rochester & Pittsburgh Ry. Canadian National Lines in New England Canadian Pacific Ry. (Lines in Me.) Canadian Pacific Ry. (Lines in Vt.) Central of Georgia Ry. Chicago & North Western Ry. Chicago, Burlington & Quincy R.R. Cigo., Rock Island & Pac. (Inc. CRI&P) Cigo., St. Paul, Minneapolis & Omaha Ry. Colorado & Southern Ry. Delaware & Hudson R.R. Corp. Delaware, Lackawanna & Western R.R. Denver & Rio Grande Western R.R. Duluth, Missabe & Northern Ry. & Duluth, Winnipeg & Pacific Ry. Elgin, Joliet & Eastern Ry. & Florida East Coast Ry. Fort Worth & Denver City Ry. Grand Trunk Western R.R. Great Northern Ry. Gulf Coast Lines Illinois Central System International-Great Northern RR. Lake Superior & Ishpeming R.R. Minneapolis, St. Paul & S. Marie Ry. Missouri-Illinois RR. Missouri Pacific R.R. Nashville, Chattanooga & St. Louis Ry. New York Central Lines N.Y.C. & St. L. (Niche Plate Dist.) Norfolk & Western Ry. Northern Pacific Ry. Northwestern Pacific R.R. Pennsylvania R.R. System Pullman Company Railway Express Agency, Inc. Reading System Richmond, Fredericksburg & Potomac R.R. St. Joseph & Grand Island Ry. St. Louis-San Francisco Lines Southern Pacific Lines Spokane, Portland & Seattle Ry. Staten Island Rapid Transit Ry. Texas & Pacific Ry. Union Pacific System Western Maryland Ry. Wichita Valley Ry.
	Total compensation plus relief department benefits 10 years preceding retirement + 120	15	None	15.00	
	Payroll for 10 years previous to retirement	15	None	25.00	
	Average monthly pay during last 10 years of service	15	None	None	
	Actual earnings for last 10 years of service	25	75.00	25.00	
	Highest consecutive ten years earnings as shown on payroll	15	None	25.00	
	Wages for 10 years prior age 65 + 120 (large time losses treated on their merits)	15	None	25.00	
	Wages for 10 years prior age 65 + 120 (large time losses treated on their merits)	15	None	25.00	
	Actual earnings 10 years immediately preceding date of retirement	15	None	25.00	
	Actual earnings 10 years preceding month of retirement + 120	15	None	12.00	
25 - at age 65 optional 25 - men age 65 25 - women age 55	Earnings last 10 years + 120 (unless absence due disability incident to service)	15	150.00	25.00	INFORMAL PLANS: Ann Arbor R.R. Benton & Maine R.R. Central R.R. Co. of New Jersey Central Vermont Ry. Inc. Chesapeake & Ohio Ry. Chicago & Eastern Illinois Ry. Detroit & Mackinac Ry. Detroit & Toledo Shore R.R. Erie R.R. System Georgia & Florida R.R. Kansas City Southern Ry. (Inc. T&P) Lehigh Valley R.R. Louisville & Nashville R.R. Maine Central R.R. Mississippi-Kansas-Texas Lines N.Y.C. & St. L. (L&E Dist.-Clover Leaf Dist.) New York, New Haven & Hartford R.R. New York, Ontario & Western Ry. Pere Marquette Ry. St. Louis Southwestern Lines Seaboard Air Line Ry. Texas Mexican Ry. Wabash Ry.
	Earnings last 10 years + 120 (unless absence due disability incident to service)	15	150.00	20.00	
	Total earnings last 10 years, excluding amounts earned at penalty rates + 120	15	None	None	
	Earnings last 10 years + 120 (unless absence due disability incident to service)	15	150.00	25.00	
	Average monthly earnings for last 120 months times number years in service	15	None	None	
	Actual earnings last 10 years preceding retirement	15	None	25.00	
	Average monthly pay 10 years preceding retirement	15	150.00	20.00	
	Actual earnings last 10 years service + actual time worked last 10 years	15	None	None	
	Highest 10 consecutive years earnings as shown on payroll	15	None	25.00	
	Average monthly pay during last ten years of service	15	None	None	
25 - age 65	Average regular monthly pay 10 years immediately preceding retirement	25	None	None	INFORMAL PLANS: Ann Arbor R.R. Benton & Maine R.R. Central R.R. Co. of New Jersey Central Vermont Ry. Inc. Chesapeake & Ohio Ry. Chicago & Eastern Illinois Ry. Detroit & Mackinac Ry. Detroit & Toledo Shore R.R. Erie R.R. System Georgia & Florida R.R. Kansas City Southern Ry. (Inc. T&P) Lehigh Valley R.R. Louisville & Nashville R.R. Maine Central R.R. Mississippi-Kansas-Texas Lines N.Y.C. & St. L. (L&E Dist.-Clover Leaf Dist.) New York, New Haven & Hartford R.R. New York, Ontario & Western Ry. Pere Marquette Ry. St. Louis Southwestern Lines Seaboard Air Line Ry. Texas Mexican Ry. Wabash Ry.
	Earnings last 10 years divided 120 (unless absence due disability incident to service)	15	150.00	25.00	
	Highest consecutive 10 years earnings as shown on payroll	15	None	None	
	Average pay last 10 years of service	15	None	25.00	
	Average monthly pay last 10 years	15	None	20.00	
	Total earnings 120 months preceding retirement + actual number of months worked	15	None	20.00	
	Average monthly pay last 10 years of service	15	None	20.00	
	Average earnings for 10 years next preceding retirement	15	100.00	15.00	
	Total earnings for last 10 years + number of months worked during the period	15	None	15.00	
	Average monthly pay last 10 years of service	15	100.00	30.00	
40 - age 65 under 70 45 - ages 65 to 69	Average monthly pay last 10 years of service	15	None	20.00	INFORMAL PLANS: Ann Arbor R.R. Benton & Maine R.R. Central R.R. Co. of New Jersey Central Vermont Ry. Inc. Chesapeake & Ohio Ry. Chicago & Eastern Illinois Ry. Detroit & Mackinac Ry. Detroit & Toledo Shore R.R. Erie R.R. System Georgia & Florida R.R. Kansas City Southern Ry. (Inc. T&P) Lehigh Valley R.R. Louisville & Nashville R.R. Maine Central R.R. Mississippi-Kansas-Texas Lines N.Y.C. & St. L. (L&E Dist.-Clover Leaf Dist.) New York, New Haven & Hartford R.R. New York, Ontario & Western Ry. Pere Marquette Ry. St. Louis Southwestern Lines Seaboard Air Line Ry. Texas Mexican Ry. Wabash Ry.
	Average monthly pay received 10 years preceding retirement	15	None	20.00	
	Total compensation last ten years of service + actual months during period	15	None	10.00	
	Average monthly earnings last 10 years preceding retirement	15	200.00	5.00	
	Total earnings last ten years + actual months worked during period	15	None	20.00	
	Total earnings 10 years preceding date of retirement + 120	15	416.66	25.00	
	Average monthly pay for 10 year period preceding retirement + actual no. of mos. worked	15	None	None	
	Total pay last 10 years + number of months actually engaged during that time	15	None	15.00	
	Average monthly wages last 120 months	15	None	15.00	
	Average monthly pay 10 years preceding retirement	15	None	20.00	
45 - at age 65 or over	Average earnings last 10 years of service	15	None	None	INFORMAL PLANS: Ann Arbor R.R. Benton & Maine R.R. Central R.R. Co. of New Jersey Central Vermont Ry. Inc. Chesapeake & Ohio Ry. Chicago & Eastern Illinois Ry. Detroit & Mackinac Ry. Detroit & Toledo Shore R.R. Erie R.R. System Georgia & Florida R.R. Kansas City Southern Ry. (Inc. T&P) Lehigh Valley R.R. Louisville & Nashville R.R. Maine Central R.R. Mississippi-Kansas-Texas Lines N.Y.C. & St. L. (L&E Dist.-Clover Leaf Dist.) New York, New Haven & Hartford R.R. New York, Ontario & Western Ry. Pere Marquette Ry. St. Louis Southwestern Lines Seaboard Air Line Ry. Texas Mexican Ry. Wabash Ry.
	Total earnings ten years preceding retirement + months worked during period	15	None	None	
	Average monthly pay 10 years preceding retirement	15	None	25.00	
	Average monthly earnings 10 years preceding retirement	15	150.00	20.00	
	Average monthly pay 10 years preceding retirement	15	None	None	
	Average monthly pay 10 years preceding retirement	15	None	25.00	
	Earnings 10 years previous to retirement	15	None	25.00	
	Earnings 10 years preceding retirement	15	100.00	25.00	
	Average monthly pay 10 years preceding retirement	15	None	25.00	
	Average monthly earnings 10 years preceding retirement	15	100.00	0	
No specified years	Earnings last 10 years + 120 (unless absence due disability incident to service)	15	150.00	25.00	INFORMAL PLANS: Ann Arbor R.R. Benton & Maine R.R. Central R.R. Co. of New Jersey Central Vermont Ry. Inc. Chesapeake & Ohio Ry. Chicago & Eastern Illinois Ry. Detroit & Mackinac Ry. Detroit & Toledo Shore R.R. Erie R.R. System Georgia & Florida R.R. Kansas City Southern Ry. (Inc. T&P) Lehigh Valley R.R. Louisville & Nashville R.R. Maine Central R.R. Mississippi-Kansas-Texas Lines N.Y.C. & St. L. (L&E Dist.-Clover Leaf Dist.) New York, New Haven & Hartford R.R. New York, Ontario & Western Ry. Pere Marquette Ry. St. Louis Southwestern Lines Seaboard Air Line Ry. Texas Mexican Ry. Wabash Ry.
	Average monthly earnings last 10 years times years continuous service	15	75.00	25.00	
	Wages middle week every third month 10 years prior to retirement or prior age 70	15	45.00	10.00	
	Actual earnings last 10 years of service	15	None	None	
	Total earnings 10 years preceding retirement + months worked or subject to call	15	None	15.00	
	Generally a nominal allowance - governed by circumstances (allowances range \$25 to \$50)	None	None	None	
	Average compensation 10 years preceding retirement times years service	15	50% salary	25.00	
	Average for 10 years of highest rates paid	15	None	None	
	Average monthly pay last 10 years	15	1	None	
	Approximately 50% employees earnings when retired from service	None	None	None	
Service required	Average earnings 10 years immediately prior date of retirement (exceptions made by co.)	15	None	None	INFORMAL PLANS: Ann Arbor R.R. Benton & Maine R.R. Central R.R. Co. of New Jersey Central Vermont Ry. Inc. Chesapeake & Ohio Ry. Chicago & Eastern Illinois Ry. Detroit & Mackinac Ry. Detroit & Toledo Shore R.R. Erie R.R. System Georgia & Florida R.R. Kansas City Southern Ry. (Inc. T&P) Lehigh Valley R.R. Louisville & Nashville R.R. Maine Central R.R. Mississippi-Kansas-Texas Lines N.Y.C. & St. L. (L&E Dist.-Clover Leaf Dist.) New York, New Haven & Hartford R.R. New York, Ontario & Western Ry. Pere Marquette Ry. St. Louis Southwestern Lines Seaboard Air Line Ry. Texas Mexican Ry. Wabash Ry.
	Not necessarily computed monthly earnings - each case considered on its merits	15	None	None	
	Average monthly salary last ten years previous to retirement	15	None	15.00	
	Average earnings last 10 year period - years of service & financial condition considered	None	45.00	10.00	
	Average monthly earnings last 10 years service	15	100.00	None	
	Monthly earnings, age, years of service and finances of employee considered	None	None	None	
	Monthly earnings based on weeks incl. 15th Jan.-Apr.-Jul.-Oct. 10 years prior retirement	15	None	None	
	40% last 10 years average salary	15	None	None	
	Average earnings last 10 years; age, service & service record & physical ability considered	15	None	None	
	No set method. Employees in train or engine service receive pension from organization and company pays like sum. Other employees about 50% of former pay.	None	None	None	
the board	Average earnings 10 years prior to date of pension	15	None	None	INFORMAL PLANS: Ann Arbor R.R. Benton & Maine R.R. Central R.R. Co. of New Jersey Central Vermont Ry. Inc. Chesapeake & Ohio Ry. Chicago & Eastern Illinois Ry. Detroit & Mackinac Ry. Detroit & Toledo Shore R.R. Erie R.R. System Georgia & Florida R.R. Kansas City Southern Ry. (Inc. T&P) Lehigh Valley R.R. Louisville & Nashville R.R. Maine Central R.R. Mississippi-Kansas-Texas Lines N.Y.C. & St. L. (L&E Dist.-Clover Leaf Dist.) New York, New Haven & Hartford R.R. New York, Ontario & Western Ry. Pere Marquette Ry. St. Louis Southwestern Lines Seaboard Air Line Ry. Texas Mexican Ry. Wabash Ry.
	40% of last monthly earnings	15	None	None	
the board	Average monthly earnings last ten years worked times number years in continuous service	15	75.00	25.00	INFORMAL PLANS: Ann Arbor R.R. Benton & Maine R.R. Central R.R. Co. of New Jersey Central Vermont Ry. Inc. Chesapeake & Ohio Ry. Chicago & Eastern Illinois Ry. Detroit & Mackinac Ry. Detroit & Toledo Shore R.R. Erie R.R. System Georgia & Florida R.R. Kansas City Southern Ry. (Inc. T&P) Lehigh Valley R.R. Louisville & Nashville R.R. Maine Central R.R. Mississippi-Kansas-Texas Lines N.Y.C. & St. L. (L&E Dist.-Clover Leaf Dist.) New York, New Haven & Hartford R.R. New York, Ontario & Western Ry. Pere Marquette Ry. St. Louis Southwestern Lines Seaboard Air Line Ry. Texas Mexican Ry. Wabash Ry.
		15	75.00	25.00	

have become incapacitated by reason of old age or other cause or who are in destitute circumstances. Matter of charity, no plan or obligation.

long service records certain gratuity payments.

of pensions as and when authorized by the Board of Directors; to continue at the pleasure of the Board. Each case considered on its merits.

service are controlling factors.

long service records certain gratuity payments.

partially. Outstanding, faithful, efficient, loyal men who have served the company many years who have become disabled through the infirmities of age.

as is handled on its merits.

irement age. When employees of long service are no longer able to continue in service, consideration is given to health, financial condition, etc.

to the extent of 25%. Plus 25% in exceptional cases. A Bessemer & Lake Erie R.R., Duluth, Missabe & Northern Ry., and the Elgin, Joliet & Eastern R.R. Steel Corporation on January 1, 1911, and applied to its subsidiaries. Any faithful employee irrespective of age or length of service, in case of discretion of proper authorities. Employees who enter service after attaining the age of forty years are not eligible for pension as is other extraordinary service. A limit of employable age under pension rules is 35 years. Employees who have completed 35 years service can receive pension payments over and above pre-rate share of income from United States Steel and Carnegie Pension Fund are made from current earnings. Aiken Life Insurance Co., for certain employees. Payments made on account of pensions granted in 1925, 1926 and 1927 are charged to pension fund. Employees and 30 years for female employees. Prior to November 1, 1929 this company followed the plan of the American Express Company who in 1906 & 1907 was inaugurated May 1, 1928. \$75 for each year of service not exceeding 40 years, but not including any service beyond 40 years. Total and permanent disability.

had appointed a committee to discuss the subject of pensions with a committee representing the labor organizations, but before any meetings were held and before the railroads had been advised that the employees were willing to contribute to a pension plan, bills providing for a compulsory plan to be administered by a government board were introduced in Congress on behalf of the Railway Labor Executives' Association and the Railway Employees' National Pension Association, a new organization formed for the purpose. These bills, on which hearings were held last year and this Spring, were the basis for the new legislation, although many compromises and modifications were made, largely to meet in part criticisms offered by Co-ordinator Eastman.

The Pennsylvania's Action

The Pennsylvania, whose pension plan dates back to 1900, and which has the largest pension roll of any of the railroads, has issued notice that "inasmuch as the government has set up a compulsory pension plan, the existing plan of the Pennsylvania Railroad Company has been revised, effective August 1, 1934, so that no pensions to take effect after August 1, 1934, will be authorized under the company's plan."

In revising its plan, however, and pending a better understanding of the scope and the provisions of the government plan, the company desires to avoid any unnecessary anxiety or inconvenience to its employees, especially in view of the fact that the payment of annuities provided under the government plan cannot commence before February 1, 1935.

Accordingly, until the government transfers such pensions to its retirement system established by the act, the company, until further notice, will continue to pay such pensions monthly as were in effect July, 1934. For employees retired after August 1, 1934, the government pensions will not be payable before February 1, 1935, or thereafter. Until further notice, therefore, this company, until and unless otherwise ordered, will make allowances for the period from August 1, 1934, to February 1, 1935, to such of its employees as would have become eligible for pensions during that period under the company's plan previous to the date of its revision, in such amounts, at such times and under such conditions as were applicable under its pension plan during the month of July, 1934.

The notice also said that the company is willing, under the permission accorded by the act, to extend the time for retirements of employees between 65 and 70 if their services are required and if they desire such extension and are physically and mentally able, as determined by the company, to perform active service.

Upon the functioning of the Railroad Retirement Board the appropriate officers of the company will negotiate in behalf of the company and its employees for substitution of the provisions for annuities and other benefits to employees under the act for the provisions of the company's plan of voluntary payment of pensions to employees.

It is understood that most of the roads have decided to collect and impound the 2 per cent deduction from payrolls, together with the 4 per cent contribution to be made by the railroads themselves, pending the outcome of the proposed injunction suit. Under the law the employee and carrier contributions are to be paid into the Treasury of the United States quarterly or at such other times as ordered by the board.

Railroads Plan Court Test

The law committee of the Association of Railway Executives, and a sub-committee appointed for the purpose, have held several meetings for the purpose of making plans for contesting the constitutionality of the new law in the courts and the railroads are hopeful of being able to obtain an injunction which will prevent the new plan from becoming effective until it has been passed upon by the Supreme Court. In the absence of an in-

junction, however, they would be subject to call for the percentage contributions at any time and the board has no special appropriation for its administrative expenses, estimated at some \$5,000,000 a year, which are expected to be met from the contributions to the retirement fund.

The provision for the taking over of the obligations of the railroads under their existing plans under the new system is in Section 6 of the law and the policy adopted by the board under it will doubtless depend somewhat upon the amount it will be called upon to pay out of the pension fund to meet the annuities provided for new pensioners. The board also, however, has power to increase the fund at its disposal by calling upon the railroads and their employees for larger percentages than those fixed initially in the law. The board has established temporary offices in the new Interstate Commerce Commission Building in Washington and is expected to give its interpretation of Section 6 very shortly.

Provision in the Law for Existing Pension Systems

Section 6 provides that the Railroad Retirement Board shall have the power to provide by appropriate rules and regulations for substituting the provisions for annuities and other benefits to employees under the act for any obligation for prior service or for any existing provisions for the voluntary payment of pensions to employees subject to the act by a carrier or any employees subject to the act, so as to relieve such carrier from its obligations for age retirement benefits under its existing pension systems and to transfer such obligations to the retirement system established by the new law. However, if the fulfillment of any such transferred obligation shall require additional contributions or larger payments than would otherwise be required under the provisions of the act, then such additional contributions are to be made by the carrier originally responsible for the creation of such obligation or for the excess amount of such payments over those which would be required under the provisions of the act.

In the event that the board is unable to make satisfactory arrangements with any carrier for the substitution of the provisions under the act for its existing pension system, then the provisions of the act are to be applied to that carrier and its employees without regard to any conflict or duplication in the operation of such an existing pension system and the operation and effect of the provisions of the act. It is also provided that the board, at its option, shall have power, in lieu of the foregoing provisions, to order that all former employees of carriers, who prior to the effective date have become separated from the service at the age of 70 years or over and who may or may not be receiving age retirement benefits, shall be entitled to the benefits of the act. As this is "in lieu of" the other provisions, presumably it assumes that if this plan should be adopted the obligations of the existing systems would be left to the railroads.

In other words, if the board does relieve a company from its present pension obligations the company may still be required to pay at least a part of the present obligations in addition to the amounts it will be called upon to contribute to the new system.

Demands on New Fund Uncertain

It is impossible to estimate very closely in advance how many employees will elect to retire under the provisions of the law. Those having reached the age of 65 may be retained in service for a year at a time up to the age of 70 by agreement between the employee and the company and there is no way of ascertaining how many employees, eligible to retire at ages below 65 because they have had 30 years of service, will elect to

do so, collect a pension reduced by one-fifteenth for each year they are less than 65, and perhaps obtain other employment.

Characteristics of Present Plans

The provisions of the railroad pension plans vary considerably. Of the 74 formal and informal plans, 62 provide for pensions on account of age, 72 on account of disability, and 10 on account of length of service. Except in a few instances retirement is compulsory at age 70, instead of 65 as under the law, but a few roads in the past two or three years have refrained from retiring employees even at that age.

The number of years of service required before employees become eligible for pension benefits also vary. Where retirement is on account of age, the minimum length of service ranges from 10 to 35 years. Where retirement is on account of disability, the minimum length of service ranges from 10 to 30 years.

The basis of the pension payment is usually the average earnings of the employee during the 10 years immediately preceding retirement, although there are some variations from this practice. The pension is usually calculated on the basis of one per cent for each year of service, with minimum or maximum limits in some cases. As compared with the maximum pension of \$120 a month provided in the new law, nine roads had maxima of \$150 a month or more but a majority had no maximum. A somewhat larger number of plans fix a minimum pension rate, ranging from \$10 to \$25 a month.

The Bureau of Railway Economics made a detailed survey of the railroad pension plans last year for the railroad pension committee, the results of which were placed in evidence at the hearings before the Congressional committees, but much of the data was for the year 1932 and has not been specifically brought up to date. This showed that the 74 railway companies or systems that had formal or informal plans reported a total of 30,069 pensioners at the end of 1925, and 49,547 pensioners at the end of 1931. Thus the number on their pension rolls increased 64.8 per cent in six years.

The characteristics of the different plans are shown in the accompanying table, which was presented to the Senate committee by Dr. Julius H. Parmelee, director of the Bureau of Railway Economics.

The railroad plans usually require continuous service for the railroad or system and a strike, voluntary absence, or long furlough usually interrupts continuous service as defined by the railroads. The railroad pensions therefore have been to some extent in the nature of a reward for loyalty, whereas the new plan treats the railroads as a single system and recognizes service on any railroad regardless of the continuity or reason for separation from service. The government plan also provides pensions for men retired at comparatively low ages if they have 30 years of service, although the pensions of those retiring before 65 would be reduced by the operation of the "cut-back." Of present living pensioners, a survey made for Mr. Eastman showed, 46.08 per cent were retired at age 70 or over.

In 1925 a total of 5,278 employees were granted pensions. This number increased to 8,022 in 1931. The total number granted pensions from the inauguration of all these pension plans down to the end of 1931 was 103,553 men and the total payments for pensions from the beginning date of each plan to the end of 1933 amounted to \$339,693,000. Total payments for pensions in 1923 amounted to \$11,816,000 and the payments in 1933 amounted to \$34,244,000, an increase of 190 per cent. The latter figure includes \$33,520,335 actually charged to operating expenses, account 457, as well as

some payments made from trust funds. The amount of pensions paid and charged to operating expenses by Class I roads in the years 1923 to 1933, inclusive, was as follows:

1923	\$11,815,702
1924	13,349,024
1925	18,528,633
1926	22,372,016
1927	24,637,019
1928	22,344,626
1929	25,594,720
1930	28,872,875
1931	32,288,960
1932	31,969,127
1933	33,520,335

Some of the railroads making large payments for pensions in 1933 as shown by their charges to operating expenses for this purpose were: Pennsylvania, \$7,884,088; New York Central, \$2,737,739; Baltimore & Ohio, \$2,105,259; Chicago, Burlington & Quincy, \$1,145,668; Illinois Central, \$1,107,304; Northern Pacific, \$950,682; New York, New Haven & Hartford, \$943,045; Chicago & North Western, \$806,716; Norfolk & Western, \$626,953; Erie, \$525,079; Great Northern \$494,165.

Some data illustrating the pension experience of one of the larger railroad systems was put into the record before the Senate committee last year by Frank V. Whiting, general claims attorney and chairman of the board of pensions of the New York Central Lines, who was chairman of the committee on pensions of the Association of Railway Executives. This system has had a pension plan since 1910 and up to the end of 1931 had granted 12,007 pensions. The average annual pension being paid in that year was \$793.68, as compared with a general average for all roads of \$753.26. Out of the 12,007 employees pensioned, there remained on the pension rolls at the end of 1931, 5,239, or approximately 44 per cent. The average age of the pensioners at the time they were retired was 67.15 years. The average service of the pensioners had ranged from 34 to 36 years. The cumulative growth of the pension system was shown by the fact that the amount expended for pensions in the first year, 1910, was \$289,590, and by 1931 had grown to \$3,504,000. Based on actuarial calculations it was estimated that the total sum that would have to be disbursed eventually to the 12,007 pensioners would approximate \$57,000,000, of which \$29,086,517 had been expended up to the end of 1931, indicating future payments, excluding reference to any subsequent grants, of \$28,211,777.

Eastman on Existing Pension Systems

In describing the existing pension systems before the Senate committee, Mr. Eastman said: "Pension systems have been in existence in the railroad industry for as long as 50 years. The experience, however, has not been satisfactory, which explains why you have the problem before you now. The systems were established gradually. Each carrier tended to copy plans already in effect, with a few minor modifications. So long as railroad employment expanded and payrolls increased, the systems were not given any very penetrating thought. Some modifications were made in the light of experience, and certain practices changed within the original framework.

At the outset of the depression the plans were, as can now be seen, out of date; liabilities were tremendous, with practically no funds to meet them. As a result, retirement incomes were reduced, and retirements were slowed down or stopped altogether. There is a question as to how far the liabilities under these voluntary plans are legally binding upon the carriers. That there is a strong moral obligation, however, will hardly be questioned; and complete abandonment of the plans would work havoc with labor relations.

Practically all roads reduced pensions at, or shortly after, the beginning of the 10 per cent wage deduction in 1932, most of the reductions being also 10 per cent, but some roads, such

as the Boston & Maine, the New York Central, and the Chicago & North Western, reduced some or all pensions from 15 to 40 per cent. Retirements in 1933 were considerably fewer than in 1932, many roads making no retirements short of the compulsory age, 70, and some roads suspending even that provision. At least one road has made no retirements for three years.

Pension Reserves

With the exception of one large company which has set up a trust fund for the purpose and which last year paid a considerable amount in pensions from that fund instead of operating expenses, two small companies which have some funds invested, and three companies which participate in the United States Steel and Carnegie pension funds, none of the pension liability is financed nor are reserves set up against currently accruing liability during the working life of the employees to meet potential pensions, but current pension payments are met from current earnings. In his testimony before the Senate committee during the hearings on the pension bill Co-ordinator Eastman said that estimates had been made of the liabilities already accrued under these plans, assuming their continuation, ranging from \$700,000,000 to about \$900,000,000, but that in view of the lack of basic information, even this range does not cover the possible margin of error.

The new law provides no reserves for liabilities arising from past or future service, and is therefore also a "pay-as-you-go" plan, although some of its proponents insisted that the contributions provided for would be sufficient to create some reserve for the future. The Retirement Board is directed to make a special report to the President and Congress within four years, making "specific recommendations for such changes in the retirement system hereby created as shall assure the adequacy and permanency of said retirement system on the basis of its experience and all information and experience then available." For this purpose the board is directed from time to time to make such investigations and actuarial studies as shall provide the fullest information practicable for such report and recommendations. Co-ordinator Eastman has been making a comprehensive investigation of the subject and had asked Congress to postpone legislation until he could report to its next session. As Murray W. Latimer, the chairman of the new board, has been Mr. Eastman's principal technical adviser on the subject it is expected that the studies that are being made for Mr. Eastman will be taken advantage of. Mr. Eastman's idea, as described to the Senate committee, is that "the necessity for reasonably accurate accounting requires that the current accounts show as nearly as possible the liabilities incurred for pensions by reason of service rendered during the accounting period. Under present railroad pension plans the accounts reflect the pension liability, not when it is incurred, but when it is liquidated. The result is that thus far the net incomes of the railroads have been overstated by the amount of the currently accruing pension liabilities and, in the future, if the present plans are continued, there must necessarily be a corresponding understatement. Costing on the basis of judicious estimates is not peculiar to pensions. Accounting for depreciation and obsolescence necessitates estimates of the length of property life, which in turn involves certain factors not subject to precise prediction.

"The nature of a pension plan is such that an exact statement of cost is impossible. An employee aged 25, for example, may earn pension credit which will begin, if he lives, 40 years hence. Of any large group, at any given time, some of those at age 25 will be on the pension roll 75 years later. No one is able to predict exactly the number of pensioners so far in advance. But this does

not imply that the best possible estimate ought not to be made."

On the other hand, some economists have taken the position that the plan of accounting for pensions by charges to operating expense at the time the payments are made is the sound one, just as the railroads defend their practice of accounting for property depreciation by charges made when the property is retired, except as to equipment for which the Interstate Commerce Commission has long required depreciation reserves.

A few years ago various proposals were made to the Interstate Commerce Commission by some of the railroads looking to a change in the commission's accounting rules that would enable them to create a reserve fund for the payment of pensions by making a charge to operating expenses monthly, based on an actuarial estimate of the accrued liability for pensions, but the commission's Bureau of Accounts took the position that charges should be made to operating expenses accounts only for pensions actually paid unless the railroads would place their pension systems on a basis of contractual obligation which would insure that the reserves should be used for pension purposes only. This was on the ground that the public should not be asked to pay for a charge to expenses without definite assurance that the money would be used for the purpose intended. The matter was made the subject of some correspondence between the Bureau of Accounts and the Railway Accounting Officer's Association and in connection with the proposed revision of the commission's accounting rules the bureau at one time tentatively suggested a note to be appended to the rule governing charges to the pension account as follows:

"In case the carrier's pension plan establishes an irrevocable or contractual obligation for the payment of pensions, it shall, when so authorized by the Interstate Commerce Commission, accrue reserves through charges to this account to cover its actual liability for such payments. Applications to the commission to grant authority to accrue such reserves to this account shall contain a full statement of the facts which in the judgment of the carrier establish an irrevocable or contractual obligation. This statement shall be accompanied by complete particulars of the carrier's pension plan. No charges to this account shall be made in anticipation of discretionary pension payments in the future."

The Norfolk & Western adopted a plan which did not require any change in the commission's rule because it set aside a trust fund for future pensions out of surplus, while the actual current pension payments were charged to operating expenses, the treasury being reimbursed from the trust fund. The American Telephone & Telegraph Company, whose accounting was supervised by the commission until the recent creation of a Communications Commission, also obtained commission approval of a modification of the rule similar to the tentative note referred to above, under which it set up a trust fund and segregated some assets for the purpose, recognizing a liability for pensions to its then employees. By this it was allowed to charge to expenses an amount for "liability on account of provident funds."

New and Old Plans Contrasted

If the provisions of the law were substituted for those of the railroad systems some of the pensions now being paid would be reduced while probably more would be increased. The percentages of past average compensation to be multiplied by the years of service are greater under the law than under the railroad plans where the compensation is \$150 or less, but in most cases the railroad plans provide for multiplying by the entire number

of years of service while the law takes no account of service for more than 30 years. Whereas the railroad plans usually provide for the payment of 1 per cent of the average compensation for the preceding ten years for each year of service, the new plan provides for the payment of 2 per cent of the first \$50 of monthly compensation, 1½ per cent of the next \$100, and 1 per cent of the compensation from \$150 to \$300, multiplied by each year of service not exceeding 30. Moreover most of the railroad plans impose no maximum, or a higher maximum than the \$120 a month allowed by the law, recognizing compensation in excess of the \$300 limit provided in the law. This includes retired officers in the list of pensioners and in some instances a man may receive a pension equivalent to 40 or more per cent of his average pay. The new plan makes no provision for officials paid over \$300 a month. The railroad plans are usually based on the average compensation for the ten years preceding retirement, but the new plan takes the average of the monthly compensation for all payroll periods for the eight years ending December 31, 1931, omitting the recent "lean" years.

Under the proviso in Section 6 retired employees who have not been eligible for pensions might be brought under the benefits of the law. A survey made for Mr. Eastman showed that during the last five years 20 per cent of the number retired at age 70 had been retired without pension, usually because of short continuous service.

A man whose basic average compensation has been \$300 a month would receive the same pension, \$120 a month, for 30 years of service under the law plan as a man with the same compensation retired under a railroad plan with 40 years of service and 1 per cent for each year.

The average pension paid by the railroads in 1931 was \$753.26 a year, or \$62.78 a month. This is approximately the amount that would be paid under the law to those of age 65 and over whose monthly compensation had averaged \$200, with 20 years of service, \$150 with 25 years of service, or \$125 a month with 30 years of service. It is also close to the amount which would be paid to those of age 60 retiring after 30 years of service, whose average compensation had been between \$200 and \$225 a month. Employees retiring at age 65 or over with 30 years of service and an average compensation of \$200 a month and over would be paid from \$90 to the maximum of \$120 a month.

The average compensation received by those who have been retired under existing plans has averaged about \$2,000 a year for the ten years preceding retirement, or \$167 a month. On the basis of 35 years of service that would provide a pension under the usual plan of about \$58 a month. The new plan would pay about \$80 a month at age 65 and 30 years of service.

If the present pensioners were brought under the new plan the monthly annuity payments they would receive on various bases of compensation, age, and period of service would be as follows:

Average monthly compensation	20 years of service, age 65 and over	25 years of service, age 65 and over	30 years of service or more	Age 60*	Age 62*	Age 65 and over
\$80	\$29.00	\$36.25	\$29.00	\$34.80	\$43.50	
\$100	35.00	43.75	35.00	42.00	52.50	
\$125	42.50	55.13	42.50	51.00	63.75	
\$150	50.00	62.50	50.00	60.00	75.00	
\$175	55.00	68.75	55.00	66.00	82.50	
\$200	60.00	75.00	60.00	72.00	90.00	
\$225	65.00	81.25	65.00	78.00	97.50	
\$250	70.00	87.50	70.00	84.00	105.00	
\$275	75.00	93.75	75.00	90.00	112.50	
\$300 and over	80.00	100.00	80.00	96.00	120.00	

* Assuming employee was not retired by the carriers on account of disability; if so retired the annuity would be the same as for an employee, age 65.

First Six Months Under Port-of-Entry Law

THE Kansas "Port-of-Entry" law governing the operation of trucks in that state, described in the June 16 issue of the *Railway Age*, continues to be successful.

The report for the first six months of its operation reveals the interesting fact that it has brought \$146,460 of additional revenue into the state's treasury, quite apart from the features of added safety and added responsibility for injuries or damages. The report, in detail, follows:

Total Number of Trucks of Kansas and Bordering States Passing Through the Ports

	First Quarter	Second Quarter
Kansas	47,712	55,761
Missouri	33,262	39,677
Nebraska	16,694	21,366
Colorado	3,617	4,160
Oklahoma	13,115	16,890
Miscellaneous	3,213	5,081
Total	117,613	142,935

Comparison of Motor-Carrier Taxes Collected for the First Half of 1934 As Against the First Half of 1933

	First Half, 1933	First Half, 1934
January—Motor-Carrier Tax	\$16,317.00	\$28,993.61
Port-of-Entry Tax		9,561.89
		\$38,555.50
February—Motor-Carrier Tax	17,155.00	19,264.34
Port-of-Entry Tax		10,720.35
		29,984.69
March—Motor-Carrier Tax	11,891.66	31,654.00
Port-of-Entry Tax		12,212.46
		43,866.46
April—Motor-Carrier Tax	18,632.67	46,402.81
Port-of-Entry Tax		10,875.75
		57,278.56
May—Motor-Carrier Tax	15,353.00	21,599.75
Port-of-Entry Tax		11,885.36
		33,485.11
June—Motor-Carrier Tax	42,990.14	53,600.00
Port-of-Entry Tax		12,029.44
		65,629.44
Total	\$122,339.47	\$268,799.76

* * *



The Old St. John's Park Freight Terminal of the New York Central in New York City Which Was Abandoned Recently When Operations Were Transferred to a New Modern Terminal Bearing the Same Name

National Board of Adjustment Formed

Members appointed by railways and brotherhoods
hold separate preliminary meetings in
Chicago on July 30

FORMATIVE meetings of the National Railroad Adjustment Board, created by the bill to amend the Railway Labor Act, which bill was passed as one of the final measures of the last Congress on June 18, were held in Chicago on July 30 and 31. These meetings were for the purpose of confirming the personnel of the board and to establish the organization and prepare for its early functioning.

The appointments to this board, together with the positions last held, are as follows:

Division 1

Western Lines: Dan H. Bremerman, Member, Southwestern Regional Train Service Board; Macy Nicholson, Member, Western Regional Train Service Board.

Southeastern Lines: W. C. Hudson, General Manager, Southern (Lines East).

Eastern Lines: M. F. Rolfe, Asst. to General Manager, Me. Cent.; W. G. Abriel, Asst. to V-P., Personnel, N. Y. C.

Brotherhoods: L. E. Sheppard, Asst. to President, O. R. C.; John Lundergan, Vice-President, Switchmen's Union; Fred. W. Lewis, Vice-President, B. of L. F. & E.; T. J. Bissett, Asst. Grand Chief Engineer, B. of L. E.; William Bishop, Vice-President, B. of R. T.

Division 2

Western Lines: J. A. Anderson, Master Mechanic, C. M. St. P. & P.; C. E. Peck, Supt. of Shops, O.-W. R. R. & N.

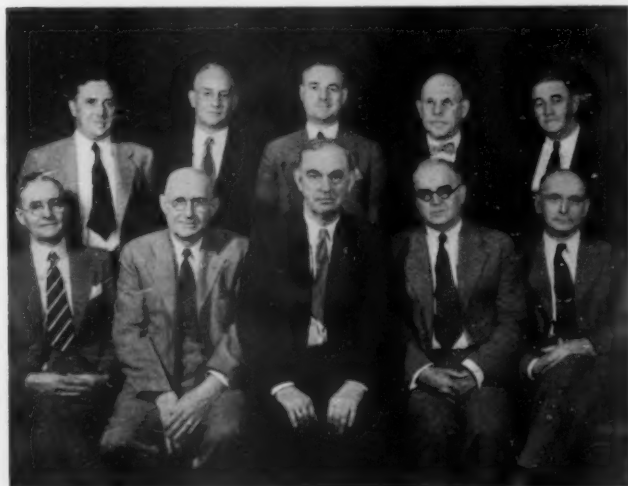
Southeastern Lines: George H. Dugan, Vice-Pres. (Subsidiary Lines), Southern.

Eastern Lines: M. W. Hassett, Asst. Supt. Equipment, N. Y. C.; A. G. Walther, Asst. Supvr. of Shops, B. & O.

Brotherhoods: Harry J. Carr, Genl. Vice-Pres., Intl. Assn. of Machinists.; George Wright, Intl. Representative, Intl. B. of B., D. F. & H.; F. H. Knight, Asst. Genl. Pres., B. of R. R. Carmen of Amer.; Chas. J. McGowan, Intl. Representative, Intl. B. of B., I. S. B. and H. of America; L. M. Wicklein, Genl. Vice-Pres., S. M. W. I. Assn.

Division 3

Western Lines: E. W. Fowler, Superintendent, C. G. W.; A. H. Jones, Member, Southwestern Regional Board.



Division 1: Seated (left to right) Thomas J. Bissett, John Lundergan, William Bishop, W. C. Hudson, F. W. Lewis; Standing (left to right) M. F. Rolfe, Dan H. Bremerman, W. G. Abriel, L. E. Sheppard, Macy Nicholson

Southeastern Lines: L. L. McDonald, Supt. Labor & Personnel, S. A. L.

Eastern Lines: R. H. Allison, Asst. to V.-P. & G. M., C. C. C. & St. L.; C. C. Cook, Maintenance Engr., B. & O.

Brotherhoods: F. F. Cowley, Vice-President, O. of R. T.; A. F. Stout, Natl. Legis. Repr., B. of M. W. E.; D. W. Helt, President, B. of R. R. Signalmen of America; W. J. Potts, Vice-President, Amer. T. D. Assn.; J. H. Sylvester, Vice-President, B. of R. & S. C. F. H. E. & S. E.

Division 4

Western Lines: A. J. Hancock, Asst. Genl. Mgr., S. P.

Southeastern Lines: E. I. Ford, Asst. to Genl. Supt., C. & O.

Eastern Lines: E. J. Hamner, Special Representative, B. & O.

Brotherhoods: J. J. Noonan, Secretary-Treasurer, Intl. Longshoremen's Assn.; C. W. Deal, Secretary, Intl. Seamen's Union; Chas. M. Sheplar, President, Natl. M. E. Ben. Assn.

The board will operate under these four divisions each more or less of an individual unit, but all with headquarters in Chicago and under the same general supervision. Division 1 will handle train and engine service matters, Division 2 has supervision over shopcraft matters, Division 3 will devote its attention to clerks, maintenance of way, signalmen, telegraphers and dispatchers, and Division 4 will handle matters pertaining to railway employees engaged in marine service.

The railway personnel of Division 1, 2 and 3 will consist of two representatives each from the Eastern and Western lines, and one from the Southeastern lines, while Division 4 will have one representative from each of the three regions.

Western Lines Appointees

Dan H. Bremerman was born in April, 1882, at Burlington, Iowa, and entered railway service in 1901, in the engineering department of the Kansas City Southern in Kansas City, Mo. In 1908, he became secretary and chief clerk to the president of the Brotherhood of Railroad Trainmen at Cleveland, Ohio, and, from 1913 to 1916, served as chief clerk to the assistant to vice-president of the Chicago, Burlington & Quincy at Chicago. From 1916 to 1917 he was chief statistician of the Association of Western Railways at Chicago, and, in 1917, he was appointed assistant to the operating vice-president of the C. B. & Q. at Chicago, in charge of negotiations with employees, leaving that position in 1928 to become a member of the Southwestern Regional Train Service Board of Adjustment, with headquarters at St. Louis, Mo., which position he held until his present appointment.

Macy Nicholson was born on October 20, 1874, at Hagerstown, Ind. He entered railway service on May 1, 1891, as clerk for the Milwaukee, Lake Shore & Western. From August 1, 1893, to June 1, 1896, he was clerk for the Chicago & North Western, leaving railway service on the latter date to become clerk at the United Steel Company's mines in Michigan. On June 1, 1898, he re-entered railway service as chief clerk to the president and vice-president of the Great Northern, being appointed assistant superintendent of that road in 1903, and superintendent in 1905. He was promoted to as-

assistant general superintendent in 1913, and to assistant to vice-president in 1917, serving from March to November of that year as a member of the commission on car service of the American Railway Association, under the Railroads' War Board. On November 1, 1917, he was appointed assistant general manager, Lines East, of the Chicago, Milwaukee & St. Paul, and, on March 1, 1920, Mr. Nicholson was promoted to general manager, Lines West. On October 10, 1924, he resigned to serve on the Train Service Board of Adjustment for the Western region, in which capacity he was serving at the time of his appointment.

J. A. Anderson was born July 9, 1883, at Delas Island, Md., and, after receiving his degree as mechanical engineer, entered the service of the Baltimore & Ohio as a special apprentice in 1904, being promoted to inspector of the test bureau in 1906, and enginehouse foreman in 1907. In 1909, he was made general foreman, locomotive and car departments, becoming motive power inspector in 1911, and assistant road foreman of engines in 1912. In 1913, he was promoted to master mechanic and, in 1919, to assistant superintendent of shops. In 1920, he entered the service of the Chicago, Milwaukee & St. Paul in the same capacity, being promoted to assistant superintendent of motive power of that road in 1928. On November 1, 1931, he was appointed master mechanic for the C. M. St. P. & P. at Milwaukee, in which capacity he was serving at the time of his present appointment.

C. E. Peck was born June 5, 1879, and entered railway service as machinist apprentice for the Southern Pacific in July, 1895. From January, 1900, to December, 1903, Mr. Peck served as machinist for the Denver & Rio Grande, the Northern Pacific and the Southern Pacific, being appointed night enginehouse foreman on the latter date, for the S. P., and becoming enginehouse foreman in December, 1908. He was appointed general foreman for the S. P. in November, 1913, and master mechanic in September, 1917. In August, 1917, he was appointed assistant superintendent motive power and machinery for the Oregon-Washington R. R. & Navigation Co., becoming superintendent of motive power and machinery for the same road on March 1, 1920. On December 16, 1932, he was appointed superintendent of shops, in which capacity he was serving at the time of his appointment to the national adjustment board.

E. W. Fowler was born October 14, 1881, at Montgomery, Pa., and entered railway service in October, 1899, as agent and operator for the Chicago Great Western, becoming trainmaster's clerk for the same road in July, 1902, and dispatcher in May, 1903. From March, 1904, to January, 1907, he served as dispatcher for various roads, returning to the C. G. W. in that capacity on the latter date, and being appointed chief dispatcher in November, 1910. In May, 1914, he was appointed inspector of transportation, and, in March, 1918, superintendent of transportation, being promoted to general superintendent of transportation in August, 1918, and assistant general manager in May, 1920. In December, 1929, Mr. Fowler was made inspector of transportation, and, in March, 1930, assistant general superintendent. In August, 1930, he was appointed superintendent of the Iowa division, being transferred to the Minnesota division in the same capacity in July, 1931, where he was serving at the time of his recent appointment.

A. H. Jones was born in England on January 2, 1886, and has been in railway service in the United States for the past 30 years, serving as clerk, timekeeper, trainmaster, superintendent, chief of personnel, and assistant to vice-president in charge of labor matters, having been



Division 2: Seated (left to right) M. W. Hassett, F. H. Knight, Harry J. Carr, George H. Dugan, J. A. Anderson; Standing (left to right) George Wright, L. M. Wicklein, Charles J. McGowan, C. E. Peck, A. G. Walther

appointed to the southwestern regional board on April 1, 1929, in which capacity he was serving when appointed to the national adjustment board.

A. J. Hancock was born on March 4, 1880, at Frankfort, Ky., and entered railway service in September, 1901. He began handling labor matters in 1918 for all classes of employees, except those in train and engine service and marine workers. In 1923, he began specializing in the handling of wages and working conditions for railway marine service employees, and, at the time of his appointment to the national board, he was serving as assistant general manager of the Southern Pacific, Pacific lines, charge of labor matters.

Southeastern Lines Representatives

W. C. Hudson was born in 1874, and his entire railway service has been with the Southern or its predecessors, Mr. Hudson having been, in succession, telegraph operator, station agent, train dispatcher, trainmaster, chief dispatcher, superintendent and general superintendent. He was serving as general manager of Lines East of the Southern at the time of his recent appointment.

George H. Dugan, was born in 1884, and entered railway service as yard clerk for the Southern, becoming transitman, assistant engineer of construction, and engineer maintenance of way of the subsidiary lines of the Southern. In 1924, Mr. Dugan was elected vice-president of the Southern's subsidiary lines, in which capacity he was serving when appointed to the national board.

L. L. McDonald was born in 1889, and has been engaged in handling labor and personnel matters for some twenty years, having served in that capacity for the Atlanta & West Point-Western of Alabama, until 1925, when he entered the service of the Seaboard Air Line in a similar capacity, having been superintendent of labor and personnel of that line at the time of his recent appointment.

E. I. Ford was born in 1871, and entered the service of the Chesapeake & Ohio in 1886 as water boy, having served the same railway since as messenger, crossing flagman, switchman, conductor, assistant yardmaster, yardmaster, general yardmaster, trainmaster, superintendent of the Newport News terminal, division superintendent, and general superintendent of the Newport News and Norfolk terminals. At the time of his ap-



Division 3: Seated (left to right) C. C. Cook, D. W. Helt, W. J. Potts, R. H. Allison, A. H. Jones; Standing (left to right) E. W. Fowler, A. F. Stout, J. H. Sylvester, L. L. McDonald, F. F. Cowley

pointment to the board, Mr. Ford was serving as assistant to general superintendent.

Eastern Lines Representatives

Walter G. Abriel was born on April 29, 1883, at New Concord, N. Y., and entered the service of the New York Central in April, 1904, as assistant operator at Dover Plains, N. Y. In May, 1906, he became assistant agent and in May, 1912, dispatcher, at that place. He was appointed dispatcher at White Plains in January, 1913, and became clerk to assistant vice-president, at Grand Central Terminal, New York, in April, 1915. From May, 1915, to 1931 he served successively as office assistant, assistant supervisor, wage bureau, and chief clerk to vice-president, personnel. In August of the latter year he was appointed assistant to vice-president, personnel. He also has been a member of the Train Service Board of Adjustment, Eastern Region, for the past two years.

M. W. Hassett was born on May 29, 1875, at Crittenden, N. Y., and attended Niagara University. He entered the service of the New York Central as telegrapher in July, 1893, and transferred to the motive



Division 4: Seated (left to right) Charles M. Sheplar, E. I. Ford, C. W. Deal; Standing (left to right) J. J. Noonan, E. J. Hamner, A. J. Hancock

power department in December, 1899. He was appointed master mechanic at Buffalo, N. Y., in December, 1909, and became general master mechanic, District No. 2, in September, 1920, with same headquarters. In September, 1926, he was appointed assistant superintendent of motive power at New York and in May, 1934, he became assistant superintendent of equipment at the same point.

A. G. Walther was born on July 19, 1881, and attended public and high schools in Parkersburg, W. Va. He entered the service of the Baltimore & Ohio in February, 1899, as a machinist apprentice. From February, 1903, to October, 1907, he served successively as clerk, motive power department, machinist apprentice, machinist and shop clerk at Parkersburg. He then became storekeeper at Connellsville, Pa., later being transferred back to Parkersburg in the same capacity. Next, Mr. Walther served successively from December, 1912, to July, 1924, as chief piece work inspector, assistant to superintendent of shops, assistant inspector of piece work, supervisor of piece work schedules, and assistant supervisor of shop machines and tools at Baltimore, Md. In 1924 he was appointed assistant supervisor of shops with the same headquarters.

Robert H. Allison, who was born on March 16, 1880, at Indianapolis, Ind., entered the service of the Cleveland, Cincinnati, Chicago & St. Louis as a clerk in 1897. He was shortly afterward promoted to secretary to the general superintendent and in March, 1901, he became chief clerk to the superintendent. During 1905 he was a station agent and in June, 1906, he was appointed trainmaster. Mr. Allison became a division superintendent in June, 1918, and was appointed assistant to the vice-president and general manager in December, 1924, which position he has since held. He has also been a member of the New York Central Lines Telegraphers Adjustment Board.

C. C. Cook was born on April 19, 1881, and was graduated from grade and high schools and normal school. He entered the service of the Baltimore & Ohio engineering department in May, 1900, as axman. From August, 1901, to July, 1908, he served successively as masonry inspector, levelman and transit man, assistant resident engineer, field engineer and chief draftsman in the engineering department. From the latter year to July, 1911, Mr. Cook held the positions of assistant engineer, maintenance of way and head draftsman, both with headquarters at Cincinnati. He was appointed division engineer at Philadelphia in 1911 and was later transferred to Pittsburgh in the same capacity. In May, 1917, he was appointed district engineer, maintenance of way, West Virginia District, and in July, 1918, he became manager of the personnel department at Baltimore. Mr. Cook was appointed maintenance engineer with headquarters at Baltimore in March, 1919.

E. J. Hamner was born on March 17, 1876, and attended public schools and business college in Ohio. He entered the service of the Baltimore & Ohio in March, 1896, as baggage master and clerk at Galatea, Ohio. He served successively from April, 1897, to December, 1906, as chief clerk to agent at Galatea, agent at Hologate, Ohio, and relief agent at Defiance, Ohio. From the latter date to January, 1916, he served as assistant traveling auditor, traveling auditor, and supervisor of station service at Baltimore, Md. Mr. Hamner held the positions of terminal agent, assistant superintendent and superintendent at New York from January, 1916, to February, 1924, when he was appointed special representative with headquarters at Baltimore, Md., in which position he has since remained.

Damage from Sweating of Steel Car Roofs

(Continued from page 142)

only four cases in the shipment of precooled lading.

In all instances where damage due to moisture was of any considerable extent evidence was found of moisture having been present on side sheets or other exposed surfaces. In the second shipment of flour in car with ceiling covered with ground cork this condition was the most pronounced and the damage was the greatest (13.2 per cent) for any shipment in the test cars.

There was one instance of one sack of flour damaged due to moisture in the car with insulating board ceiling in which the sack damaged was located at approximately the center of the load and was far removed from any possible exposure to moisture in the car. This sack was the only one damaged in the load and no evidence of moisture was found on the exposed interior surfaces of the car. It is difficult to understand why some cases of Quaker Oats products and also some sacks of flour were damaged when the damaged areas were not in contact with, or otherwise exposed to, moisture from interior surfaces of the car. Whenever a case or sack is damaged due to moisture, although it is entirely dried, the evidence of its having been wet still remains.

Based upon observations made in this series of tests and supported by the experience of railroad men handling shipments of "hot" lading, the formation of moisture in the car, with its resulting damage to lading, occurs within a period of from 24 to 36 hours after the doors of the loaded car are closed. In the first shipment of flour frost was found forming on the side plate over the doorway in the four cars before the loading was completed, and on two cars of this shipment water was found to be dripping from the door sheets within two or three hours after the doors were closed.

This is an involved subject which will require further, more extensive and detailed study and research in order that proper conclusions ultimately may be reached, including the important question of economies. The committee, therefore, has been continued and co-operation of the Freight Claim Division is being arranged for. As soon as practicable a conference will be held with the director of research, attended by the sub-committee and representatives of the Freight Claim Division, for the purpose of formulating a further program of investigation and tests to be carried out.

FURTHER IMPROVEMENT IN OPERATING RESULTS was reported by the Commonwealth Railways of Australia for the year ending June 30, 1933, when the operating deficit was £39,349 a decrease of £38,346 compared with the loss from operations in 1931-32. The improvement was the result of reductions in expenses in the face of increased earnings; gross revenues were higher by £28,345 than in 1931-32 but expenses were down £10,001. Consistent improvements in the operating results of these Commonwealth Railways has been reported for each year since 1930 when the operating deficit was £150,445. Since that year revenues have dropped 23.7 per cent while expenses have been reduced 37.3 per cent, bringing a net improvement of 73.84 per cent. Interest charges, however, continue to be a burden since the 1932-33 total of £408,262 brought the net deficit of that year to £447,611 as compared with a 1931-32 deficit after interest charges of £547,793. Nevertheless the report calls the 1932-33 results "definitely better than for any normal year since the establishment of the Commonwealth Railways, notwithstanding the depleted earnings owing to the period of depression."

Communications . . .

Federation of Investor Groups Urged for Mutual Protection

BROOKLYN, N. Y.

TO THE EDITOR:

I learn from press reports that the Association of Railway Executives is planning the formation of state associations to combat adverse legislation and regulation and to work for the furtherance of legislation equitable and fair to the railways.

In this campaign do you not think that they are overlooking the strongest factor and the one which can be made the most effective, namely the millions of stockholders? At present railways are under stringent government control and regulation and are prevented from accumulating surpluses in good years, even were that possible with competition as it is, to carry them over lean years as is permitted to industrial corporations, to say nothing of ever-mounting expenses and taxes.

Railways have their executive associations, labor is organized, there is a Railway Business Association, and there is also a Security Owners' Association, but the last-named organization supposedly represents the institutional investors in railway securities and is closely affiliated with the National Association of Mutual Savings Banks. No concerted movement has been made to interest the millions of individual shareholders.

For several months I have been endeavoring to stimulate a movement for the organization of shareholders in all lines of business by industrial groups, to be federated into a national association to work for constructive and to oppose detrimental industrial legislation; and I have also conveyed my personal views on many legislative measures to members of Congress and heads of committees and bureaus, with a certain amount of success.

Many leaders among investors, executives and heads of important trade organizations have expressed their approval of this plan in letters I have received and I feel sure that this movement to bring the 25,000,000 or more of investors into associations for mutual protection is only a question of time.

Do you not think that the organization of railroad shareholders is the logical step in this campaign for equitable legislation and regulation?

JOHN C. MARAKLE.

Sees Railroads Alert in Nothing Save Propaganda

NEW YORK

TO THE EDITOR:

I have read with much interest your able editorials upholding the cause of the railways against those insidious forces working to corrupt our railroad systems, and place them in the hands of the government. I feel, however, that your line of reasoning is a bit one-sided. You point out the evils of government subsidization and lack of regulation of water and highway carriers. You speak of the reduction in rail rates, you feature the increasing costs due to higher prices and wages and the passage of the pension law. You then recommend greater leniency in government supervision of the rail carriers. You advocate government control of railroad competition and commit yourself to higher railroad rates, but you neglect to state the all-important fact that if they are to fully recover from the past few years of depression, and retrieve the traffic lost to competing carriers, it will be necessary for the railroads to work their own way out of the muddle in which they now find themselves.

Recognition and co-operation by the public will not be extended to any industry making little or no effort to solve its own problems. American business will hardly tolerate a rate increase. Rather let rates come down in order to stimulate traffic and recover the cream of railway tonnage now moving in motor vehicles. The only real fight the railroads are making for their future existence appears to be in the form of propa-

ganda designed to tell the public of their plight, and to ask that something be done about it. The crux of the whole matter is that truck and water competition is making terrific inroads on American railway traffic while the railroads themselves are practically lying dormant in so far as concerns an analysis of the factors which have made truck and water competition possible. Yet competition is the one vital hurdle which must be surmounted and this can only be done through co-operative action by the railroads in developing an effective means of overcoming it.

While it is true that government subsidization and lack of control of highway and waterway facilities have to a certain extent fostered the growth of such railway competitors, the railroads should have long ago foreseen the inroads these competitors have made upon their traffic. They should have realized that in order to meet this competition, many obsolete, unwarranted and highly expensive facilities, the existence of which has driven rail traffic to the more flexible truck and lower priced waterway, should long since have been discarded. Some of the obsolete facilities are the freight house; the present over-sized single-duty box car; the utterly inefficient and costly method of transporting less-than-carload freight, to say nothing of the competitive and unprofitable solicitation carried on in securing this un lucrative tonnage; the special equipment designed for transporting only one or two commodities which is hauled empty over as much territory as when loaded. These are merely a few of the unbelievably extravagant and inefficient methods made use of by the railroads in transporting American commerce.

The English roads have successfully overcome highway competition. Their methods are well known in this country, but instead of in any way trying to copy the English railroads, we over here say with lordly mien, that conditions are so different on this side of the water. We refuse to take hints from our British cousins, yet we likewise refuse to convene in amicable session among ourselves so that we may co-operatively design ways and means to meet highway and waterway competition.

There appears to be only one thought dominating the mind of the American railway official. It has dominated since long before the Civil War, and that thought is that when gross revenue declines, the only way in which net operating revenue can be maintained is to slash wages, neglect maintenance, curtail service, and seek higher rates. In previous depressions gross revenue declined solely because business fell off. American domestic commerce in those times had perforce to move by rail except where river or lake waterway service was available. During the present depression railroad tonnage declined not only because of decreased business activities, but in a great measure because of the highway and the inland waterway.

Were the railroads today handling the tonnage now being carried by their competitors, their gross and net revenue columns would present a very different aspect in spite of increased costs heretofore mentioned. Wage cuts, under-maintenance, curtailment of train service and higher rates will never defeat truck competition, nor increase gross revenue. Truck competition can only be defeated by offering a superior service. It is ridiculous to say that the railroads cannot do this. It is even more surprising that they have not done so. It is almost utterly unbelievable that so vital an industry as American railway transportation should call for government patronage as the sole means of eliminating a competitor whose existence the railroads are responsible for.

The railroads will only emerge from the morass in which they are now floundering when they begin to cut costs through the elimination of obsolete facilities, through the use of flexible and many duty types of equipment, through the adoption of universal store-door pick-up and delivery service for team track and less-than-carload freight, through abolition of the present method of transporting less-than-carload freight. The result of such action would be three-fold: first, it would restore practically all paying traffic which the trucks are now handling; secondly, it would tremendously reduce operating costs; lastly it would obviate the necessity of slashing wages, neglecting maintenance, curtailing service, and threatening the shippers with higher rates. It would result in increased employee morale, it would foster a co-operative spirit among the shipping public, it would dispel forever the specter of government ownership, and it might make possible some scattered returns to those unfortunates who invested their savings during years gone by in railroad securities.

COMMERCIANT.

New Books...

History of Indian Railways, compiled and published by the Railway Department, Government of India. 294 pages, 13 in. by 8½ in. Illustrated. Bound in paper. Price 6 rupees.

This is the fourth quinquennial edition of this compilation, which was first published in 1919, and it brings the work up-to-date as of March 31, 1933. Included is a brief sketch of each railway in India giving a summary of pertinent historical, physical and financial data in a form somewhat analogous to that employed in railroad manuals published periodically by investment service organizations in this country. Also there are maps of the individual railway lines as well as a general railway map of India.

Railways and Roads in Pioneer Development Overseas, by J. Edwin Holmstrom. 304 pages, 8¼ in. by 5½ in. Bound in cloth. Published by P. S. King & Son, Ltd., London, Eng. Price, 15 shillings.

The author, identified as an engineer "with practical experience overseas," evolves in this book a technique which he hopes will be of value in any endeavor to fix for undeveloped countries "the critical conditions under which transport by rail begins to be more economical than by road, having due regard to capital, maintenance, depreciation and running costs both of the track and of the vehicles, and to all the many factors involved."

The study is divided into three parts; Part I analyzes the nature of the different forms of land transport; Parts II and III, dealing respectively with rail and road transport in a number of African, Asiatic and other countries, "develop a technique whereby all the required kinds of cost data can be derived from the published reports and accounts of the authorities concerned." Included also in Part III are comparisons and conclusions, and in the latter connection the author warns of changing conditions in pioneer lands which affect transport and thus militate against the adoption of a rigid policy for many years in advance. "The problem" he says "demands unremitting study from every aspect," and adds that if his work "has suggested useful viewpoints" its purpose will have been served.

Private Police, by J. P. Shalloo, 22½ pages, 9 in. by 6 in. Bound in cloth. Published by the American Academy of Political and Social Science, Philadelphia, Pa., Price \$2.50 (\$1.50 to members of the Academy or subscribers to The Annals who order directly from the Academy).

Banking and Transportation Problems, edited by F. Cyril James and G. Lloyd Wilson. 313 pages, 9 in. by 6 in. Paper or cloth bound. Published by the American Academy of Political and Social Science, Philadelphia, Pa., Price \$2.50 (cloth), \$2 (paper).

Here are two recent publications of the American Academy of Political and Social Science which should be of interest to railway men. In his monograph on Private Police Dr. Shalloo aims to present "as much as could be obtained of the relevant information" on the subject but was forced to leave gaps "which may be filled later when those in charge of private police organizations find it convenient and feasible to make available material which exists but which is now withheld for various reasons." The book in the main is confined to an examination of the problem in Pennsylvania "in such fashion as to bring out facts likely to be applicable to private policing wherever employed." The study is divided into four sections. The first, dealing with Railroad Police, includes four chapters on that subject, considering in turn Development and Problems, Organization and Administration, Railroad Police in Pennsylvania and Arrest Statistics and Records. Other sections deal with Coal and Iron Police; Private Detectives; and Private Patrolmen.

The other work, Banking and Transportation Problems, is Volume 171 of the Annals of the Academy. It consists of two parts—one dealing with banking is edited by Dr. James while Dr. Wilson is editor of the transportation section. This latter section's discussions on railroads, waterways, pipe lines and highways were prepared by a group of contributors which includes Dr. Julius H. Parmelee, the late Elisha Lee, General W. W. Atterbury, Maj. General T. Q. Ashburn, Newton D. Baker, Dr. C. S. Duncan and others.

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Locomotives represent only 6% of the total investment in Railway property. ■ Make the other 94% more productive by the use of modern designs of locomotives and increase the net return on the entire investment.

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Odds and Ends . . .

A Record Tank

The Delaware & Hudson claims some sort of record for its recent handling of a creosoting cylinder 80 ft. 10 in. long, weighing 44 tons. The cylinder was handled on two flat cars over a 14-deg. curve at Minooka, Pa., without shifting.

Youngest Agent?

Luther Luna, now president of a bank in Walnut, Miss., claims the distinction of being one of the youngest station agents ever employed by a railway. At the age of 13, Mr. Luna became station agent for the G. M. & N. at Walnut. After serving in that capacity for some time, Mr. Luna retired, presumably because of advancing youth, and was succeeded by his father—just a block off the old chip.

Old Habits Strong

The hold that railroading takes on one, even after the mind is disordered, was indicated at Clinton, Ind., the other day. Hiram Blackburn, an escaped inmate of an insane asylum and a former fireman, boarded a locomotive in the Chicago & Eastern Illinois yards there and started on a wild ride. Fortunately for all concerned, the ride terminated after only a short distance had been covered, when the locomotive struck a derail.

A Railroad Supporter

Rev. John E. Brown has been operating two "pay by work" schools in the Ozarks with conspicuous success for 25 years. That this educator and philanthropist is also a friend of the railways is indicated by the following circular he has recently issued to his superintendents:

The railroads have been much interested in our schools, and have always rendered fullest and most sympathetic co-operation. We urge upon our friends everywhere in planning for their children to enter these schools, that they give first thought to the safest and cheapest way to get their children to these schools—that is, by the railroads.

The highways are not safe; and with cheap transportation and drunken drivers on the highways, the John Brown schools refuse to be responsible for any student who either goes from or comes to these schools by such transportation. We ask that parents bringing their children by automobile do not impose upon the schools by asking or seeking to secure from the student body passengers paying a small fee for their transportation. Most states have a law against such traffic, and even though parents consented to their children riding to and from the schools by private conveyance, the fact remains that if any students are crippled or killed by such transportation, the schools would be blamed.

We want to make it perfectly clear that the school is not prohibiting or forbidding parents making whatever arrangements they may choose, but the school asks to be relieved of any further responsibility in the transportation of students, other than by the safest way and the reasonable way—and that is, of course, by train.

Ex-Kaiser Traces N. P. Emblem

The ingenious geometric figure which is recognized throughout the country as the Northern Pacific's trade mark just has been traced back to the old Persian empire in the year 3300 B. C. This information is contained in a treatise prepared by the former Kaiser, Wilhelm von Hohenzollern. In book form, the treatise has been received in the United States. Its title is "The Chinese Monad" by Kaiser Wilhelm II. The monad was adopted by the railway company as its trade mark in 1893 and recently the company was advised that Prince Frederick, while a passenger on the North Coast Limited in the Yellowstone Park region, had been presented with literature describing the company's monad. He in turn forwarded it to his grandfather, in exile at Doorn, Holland. According to the imperial author, he has organized a circle of selected savants under his chairmanship, known as the Doorn work committee. The book confirms that the inspiration for the treatise was furnished by

the railway company's literature and that exhaustive study and research have been conducted, delving into ancient science. In delivering his discourse before the committee, according to the book, the Kaiser declared the railway company's information regarding the monad is authentic. The monad originated in Korea, now a Japanese dependency under the name of Chosen. Research disclosed that the trade mark is practically identical with the swastika sign, which, it is declared, is the skeleton of the monad. The swastika originated in India. While both signs came into existence independently, the meaning in each case is the same. The book sets forth that the discussions at "Haus Doorn" concluded unanimously that the age of both signs, the monad as well as the swastika, date back many years before the birth of the Christ Child. The first absolute proof of the swastika sign was unearthed at Susa in the vicinity of the old Persian empire and dates from 3300 B. C. The volume, which is elaborately illustrated, discloses that the Kaiser is a keen student of antiquity.

Russian Hobos

The Utopia, where every man shall have an income sufficient for his needs, does not seem to have been arrived at in Soviet Russia—at least if one is to judge by the recent strenuous rulings against hobos there. Damage to tracks and cars by hobos, reported from many portions of the country, has moved the council of the people's commissars and the central committee of the communist party to issue an order to imprison for six months all persons caught stealing rides on trains. Vagrants who deliberately damage railway property may be imprisoned for three years. All persons not employed by railways are forbidden to live on railway property, and communist railway workers have been enjoined to inaugurate a wide propaganda campaign among transport employees to protect passengers and guard state transportation against sabotage and disruption.

Farewell to Romance

[After looking at one of the new streamlined trains]

These trains that look like giant snakes

And fairly reek with power,

That speed along

Grim, swift and strong,

A hundred miles an hour

Seem only giant trolley cars;

I'd rather hear the roar

Of rumbling locomotives,

Of giant locomotives,

Of shrieking locomotives,

By canyon, plain and shore.

The swift express, the rumbling freight

They fairly seem to fly;

Beside the black

And grimy track

I watched them thunder by.

The music of the clanging bells

I hear by night and day;

The puffing locomotives,

The rushing locomotives,

The roaring locomotives,

They can't have had their day.

Must creeping progress put an end

To one of the real joys

That brought fresh thrills

Across the hills

To eager little boys?

When they awaken in the night

Must they no longer hear

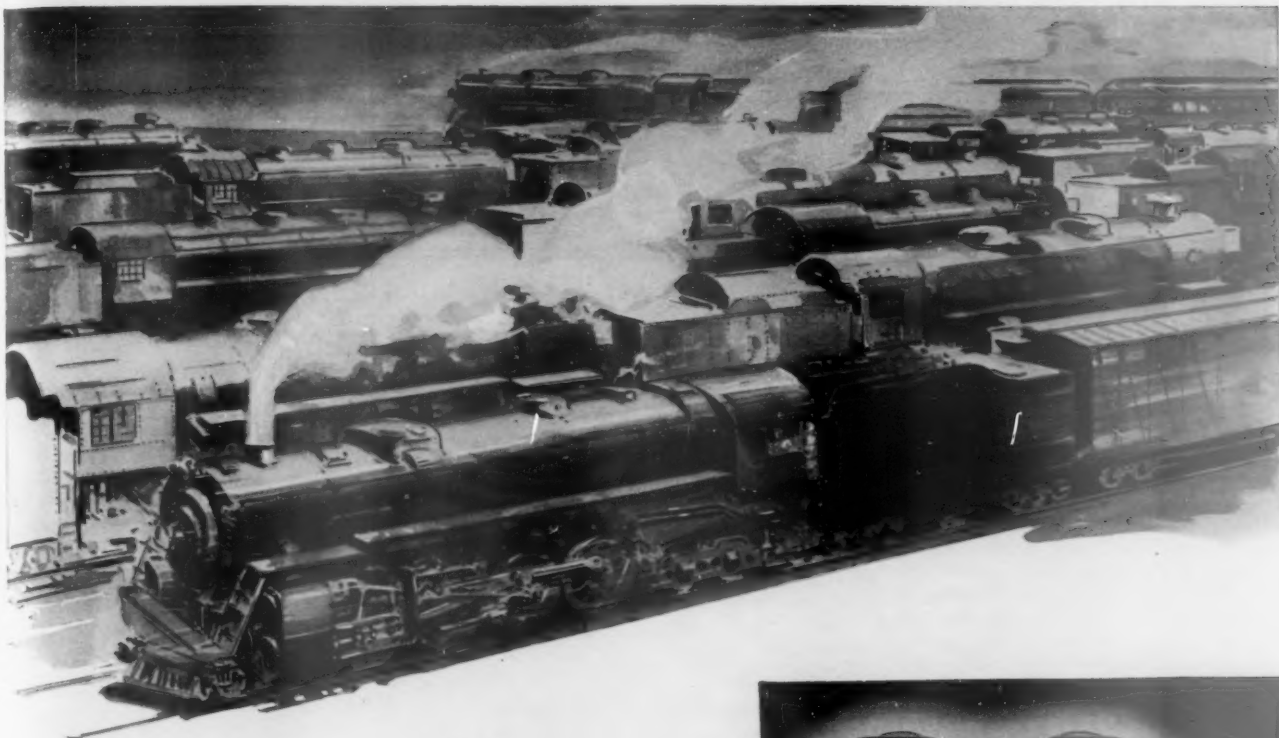
The shining locomotive,

The panting locomotive,

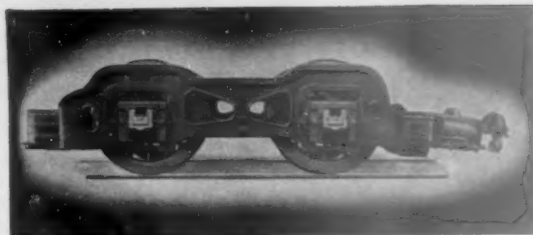
The glorious locomotive

That thunders far and near?

—New York Herald Tribune.



STORED *Isn't* POWER



BOOSTER POWER

With thousands of locomotives stored during the past several years Booster equipped power was invariably retained in service.

This period of restricted business demanded that every effort be made toward maximum economy and efficiency of operation.

That the Booster is a necessity for maximum economy of train operation was recognized by railroad management.

Booster power was kept in service, while the less efficient and more expensive locomotives were stored.



Because material and tolerances are just right for the job, genuine Franklin repair parts give maximum service life.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK

CHICAGO

MONTREAL

NEWS

I. C. C. Decision in New Jersey Lighterage Case

The Interstate Commerce Commission, on August 2, made public its long-awaited decision in New Jersey lighterage case, finding the existing grouping of New Jersey and New York points at the port of New York at the same rates not unlawful except on traffic to and from New England, as to which rates on class traffic to and from New Jersey points shall not exceed after November 3 the rates on like traffic between New England points and points within the lighterage limits now included in the New York group.

The commission also found, in the report by Commissioner Meyer, that failure of the railroads to publish separate charges for lighterage, car floatage, and trucking at the port of New York is not unlawful and that rail-water and rail-water-rail rates between New Jersey and the south and southwest and rates to and from the port of Boston are not unlawful. Storage in transit rules applicable at the port of New York are found not unduly prejudicial. However, rates between New England and Northern New Jersey points were found unreasonable and extra towing charges to and from New Jersey points at the port of New York on local traffic were found unduly prejudicial to the extent that they exceed rates within lighterage limits at the port of New York.

The evidence shows, the commission said, that historically, geographically, and commercially the whole New York port district constitutes a single community and has grown and prospered as result of the long-established practice of grouping all parts of the district at the same freight rates.

Eastern Car Foreman's Outing

The Race Brook Country Club, New Haven, Conn., was the scene of the second annual outing of the Eastern Car Foreman's Association on July 19, at which approximately 215 members and guests were in attendance. Numerous events were on the program of entertainment and the outing was climaxed by a dinner at the club house, after which the prizes for the many events were awarded.

The golf tournament, in which 107 persons took part, was the most important event of the day. The winners in Class A were R. P. Townsend and C. E. Bryant, who took the low gross prize with a score of 78. The low net in Class A was won by L. H. Foster. Low gross in Class B was won by H. B. Whitten and low net by H. B. Chamberlain. W. Spieth was the winner of the low gross prize in Class C and the low net in the same class was won by P. E. Pfeiffer. The driving

contest was won by D. J. Molloy with a drive of 256 yards. The hole-in-one contest of 40 yards was won by J. J. Wilson and F. N. Gregory. G. W. Dittmore repeated his performance of last year and won first prize in the quoits contest, and H. G. Young took second place. The bridge tournament was won by R. L. Pearson and A. E. Ostrander. In the putting contest for golfers Harry Coston took first prize. Second place resulted in a tie between George Alling and D. B. Carse. The non-golfers putting tournament was won by J. C. Hassett, and W. M. Wadsworth, in which contest there was also a tie for second place between F. H. Reynolds and C. I. Billings.

Progress Reported on Codes

The Railroad Code Committee, appointed by the General Counsel of the Association of Railway Executives, has been active during the past several months, analyzing and studying the provisions of various codes affecting railroad material and, with the assistance of the general solicitor of the association, has made several changes which are included in a recent circular issued to all railway purchasing officers. Codes considered thus far are those on: Iron and Steel; bituminous coal; lumber and timber products; petroleum; bolts, nuts and rivets—proposed; railroad special track equipment; locomotives; tank car service; oxy-acetylene; railway car appliances; railway safety appliances; scrap iron; stock yards; copper; chilled car wheels; wood preservation; mechanical packing; asbestos; lift trucks; retail jewelry; railway car building; the shipping industry; wholesale paint and varnish; envelopes; merchandise warehousing; springs; steel tires; printing; locomotive appliances; small locomotives; malleable iron; steel castings; rubber; machine screw nuts; machine screws; wood screws; galvanized ware; mechanical lubrication; heavy railroad construction; grey iron; cement.

In a letter to members of the Purchases and Stores Division, the Code Committee has requested from each railway purchasing officer further suggestions and statements of experience regarding the codes. The Code Committee consists of: C. D. Young (chairman), vice-president, Pennsylvania; A. W. Munster, vice-president, Boston & Maine; A. C. Mann, vice-president, Illinois Central; J. L. Bennett, purchasing agent, Central of Georgia; D. C. Curtis, chief purchasing officer, Chicago, Milwaukee, St. Paul & Pacific; E. A. Clifford, general purchasing agent, Chicago & North Western; G. E. Scott (chairman ex-officio), purchasing agent, Missouri-Kansas-Texas; W. J. Farrell (secretary), Purchases and Stores Division, A. R. A.

Railroad Representative Appointed to Retirement Board

John T. Williamson, superintendent of the relief and employment department of the Chicago, Burlington & Quincy and chairman of its pension board, who, as announced in last week's *Railway Age*, was on July 26 appointed by President Roosevelt as a member of the Railroad Retirement Board on recommendation of the railroads was born in Minneapolis, Minn., in February, 1884, and attended common schools and business college. He entered the

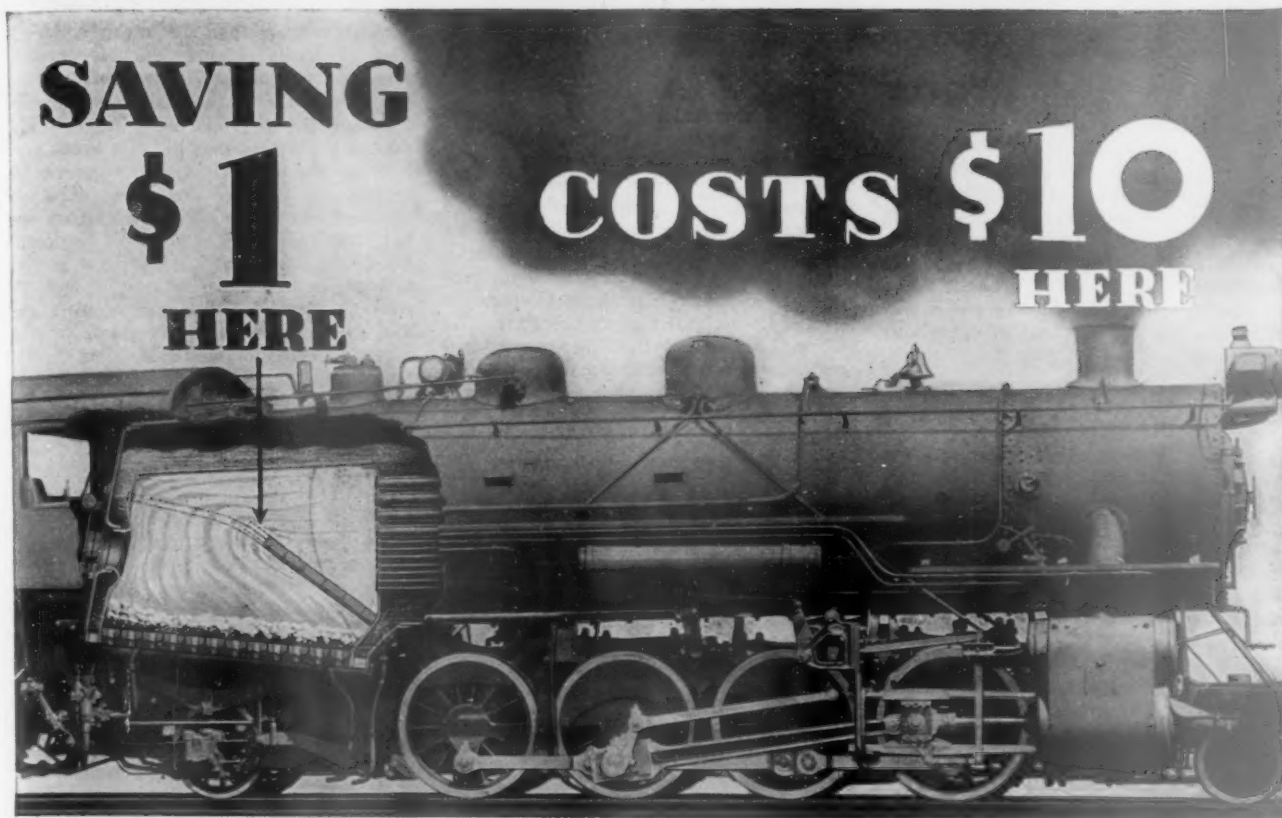


John T. Williamson

service of the C., B. & Q. in 1900 as office boy. From 1900 to 1918 he served consecutively as clerk, ticket seller at various points, tourist agent at Chicago, station passenger agent at St. Louis, Mo., and traveling passenger agent, St. Louis. He held the positions of freight service inspector and night trainmaster at Casper, Wyo., from 1919 to 1920, when he was made chief clerk, relief department at Chicago. In 1924 he was appointed superintendent of the relief department at the same point.

Drought Relief Rates to Be Continued

Interstate Commerce Commissioner Clyde B. Aitchison, as chairman of the Interdepartmental Committee on Transportation for Drought Relief announced on July 31, that by arrangement between the railroads in the western district, the present existing reduced interstate rates upon livestock and feed for animals for the relief of drought suffering, will be continued in force in that district an additional period of 30 days. The requisite short notice and reduced rate authorizations will be made by the commission so as to permit the extension to take effect August 5, upon the expiration of the present reduced rates.



**. . a shortened
arch falls short
of full economy**

*There's More to
SECURITY ARCHES
Than Just Brick*

**HARBISON-WALKER
REFRACTORIES CO.**
Refractory Specialists



AMERICAN ARCH CO.
INCORPORATED
*Locomotive Combustion
Specialists* * * *

SCRUTINIZE every dollar of expenditure today. But do it thoroughly, considering the inter-relating effect on other items, to determine the net economy.

Paring down on Arch Brick only means buying more fuel. Here is one false economy that means a net loss to the railroad.

Now, when economy is needed so sorely, don't handicap the effectiveness of the Arch by skimping on Arch Brick.

Any reduction in the number of courses of the Arch wastes \$10.00 in fuel for every \$1.00 of Arch Brick thus saved.

You need a full Security Arch for full economy.

The commission has been issuing new orders almost daily extending the area in which the rates may be applied.

Government purchases of livestock have caused an acute demand on the livestock car supply which is expected to continue unabated for some time. Up to July 16 over a million head of cattle had been purchased and it is estimated that this is less than half the number yet to be acquired. To the same date 18,000 head of cattle had been transferred from the drought areas into southern states for feeding and it was planned to ship 500,000 head of cattle into that territory.

Net Deficit For Five Months \$30,722,873

Class I railroads had a net deficit after fixed charges of \$3,649,992 for the month of May, as compared with a deficit of \$2,969,360 for May, 1933, according to the Interstate Commerce Commission's monthly compilation of selected income and balance-sheet items. For the five months ended May 31 the net deficit was \$30,722,873, as compared with \$122,622,924 in the corresponding period of last year. Net railway operating income for the five months was \$183,967,608 and other income amounted to \$66,752,344, but the interest and other deductions amounted to \$281,442,825. The statement follows:

SELECTED INCOME AND BALANCE-SHEET ITEMS OF CLASS I STEAM RAILWAYS

Compiled from 143 reports (Form IBS) representing 149 steam railways
TOTALS FOR THE UNITED STATES (ALL REGIONS)

For the month of May 1934	1933	Income Items	For the five months of 1934	1933
\$39,491,413	\$41,038,289	1. Net railway operating income.....	\$183,967,608	\$94,897,579
13,272,847	13,187,345	2. Other income	66,752,344	67,503,047
52,764,260	54,225,634	3. Total income	250,719,952	162,400,626
11,251,863	10,991,457	4. Rent for leased roads	55,349,987	54,326,822
43,381,380	44,405,384	5. Interest deductions	216,904,171	221,222,958
1,781,009	1,798,153	6. Other deductions	9,188,667	9,473,770
56,414,252	57,194,994	7. Total deductions	281,442,825	285,023,550
d 3,649,992	d 2,969,360	8. Net income	d 30,722,873	d 122,622,924
12,183,515	11,686,639	9. Dividend declarations (from income and surplus):		
971,108	1,210,484	9-01. On common stock.....	31,733,103	25,948,629
		9-02. On preferred stock.....	4,837,943	4,740,491

BALANCE-SHEET ITEMS

Selected Asset Items

	Balance at end of May 1934	1933
10. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707).....	\$767,924,839	\$776,923,773
11. Cash	312,253,527	281,529,967
12. Demand loans and deposits.....	33,154,726	30,842,353
13. Time drafts and deposits.....	45,130,517	15,098,321
14. Special deposits	43,298,532	26,765,967
15. Loans and bills receivable.....	8,184,251	11,266,888
16. Traffic and car-service balances receivable.....	55,582,239	46,037,450
17. Net balance receivable from agents and conductors.....	45,401,145	43,402,158
18. Miscellaneous accounts receivable.....	145,124,703	135,045,715
19. Materials and supplies.....	305,423,575	299,878,513
20. Interest and dividends receivable.....	45,000,050	45,845,269
21. Rents receivable	2,683,394	2,520,658
22. Other current assets	4,306,364	5,251,967
23. Total current assets (Items 11 to 22).....	1,045,543,023	943,485,226

Selected Liability Items

24. Funded debt maturing within six months*.....	54,057,300	107,309,157
25. Loans and bills payable.....	337,367,189	346,752,569
26. Traffic and car-service balances payable.....	69,839,403	61,664,712
27. Audited accounts and wages payable.....	211,504,808	203,143,165
28. Miscellaneous accounts payable.....	47,430,641	58,258,476
29. Interest matured unpaid.....	257,830,547	180,735,973
30. Dividends matured unpaid.....	4,639,692	4,852,497
31. Funded debt matured unpaid.....	248,318,971	97,992,631
32. Unmatured dividends declared	12,894,561	11,903,426
33. Unmatured interest accrued	121,434,514	125,126,955
34. Unmatured rents accrued.....	39,878,808	37,573,634
35. Other current liabilities.....	16,653,162	14,919,801
36. Total current liabilities (Items 25 to 35).....	1,367,792,296	1,142,923,839

* Includes payments which will become due on account of principal of long-term debt (other than that in Account 764, Funded debt matured unpaid) within six months after close of month of report.
† Includes obligations which mature less than two years after date of issue.
d Deficit.

Ex-River Grain Rates

The Interstate Commerce Commission, Division 3, has issued a report finding justified the proposed cancellation of the application of proportional rail rates on grain and grain products from certain Ohio and Mississippi river crossings to the South when such traffic arrives at the crossings by boat or barge under rates not subject to the commission's jurisdiction. The proposal had been suspended on protests of the Inland Waterways Corporation and the Continental Export Company. The railroads contended that the unrestricted application of the proportional rates which were designed for application to all-rail traffic would tend to destroy the grain-rate structure and unduly disturb the established relations between millers and markets.

The all-rail rate structure on grain and grain products from the territory north and west of the Ohio and Mississippi rivers to the South includes through rates which are combinations of certain factors which are such that the through rate from any point of origin to a given destination is generally the same via all of the Ohio and Mississippi river crossings. The rates from the crossings vary to the extent of the differences between the rates to those points, and where the local rates from particular crossings would make higher

through charges than the lowest combination of locals or proportionals through some other crossing, those crossings are equalized with the other through the medium of lower proportional rates. The factors to the crossings likewise break over intermediate markets in such a manner as to equalize at these crossings. The adjustment has existed for many years and has received the commission's approval. "It enables most of the carriers to participate in the traffic, results in desirable relations between millers and markets, and affords producers and consumers a wide range of selection in the distribution and purchase of grain and its products," the report said. "The equalizing feature is said to be the stabilizer of the adjustment."

Prior to 1930 the proportional rates from the crossings applied only on traffic arriving at those points by rail. In the early part of that year their application was extended generally to traffic arriving by boat or barge at St. Louis when destined to Mississippi Valley, southeastern, and Carolina territories; in May, 1931, from Cairo and Metropolis, Ill., to Mississippi Valley and southeastern territories, and in February 1932 from Paducah, Ky., to Mississippi valley territory. The cancellation of the proportional rates as proposed would leave applicable the local rates from St. Louis and Cairo ranging from 3.5 cents to 7.5 cents higher than the proportional rates.

"Determination of just levels of rates on competing traffic requires determination of all of the factors of the through rates or joint rates," Division 3 found. "The rates by water are not under our jurisdiction and the corporation indicates unwillingness to join in the establishment of joint rates. It cannot be said upon this record that the increases proposed in the rates from the ports to levels found not unreasonable for application therefrom would result in unlawful situations that can and should be controlled by our action rather than by the action of the corporation."

Air-Express Continues to Grow

For the thirty-third consecutive month, the Railway Express Agency, during June, experienced an increase of more than 100 per cent in the number of shipments handled in its air-express service, as compared with the corresponding month of the previous year. The average monthly gain over the corresponding month of the previous year for the 33-month period was 148 per cent.

During the first half of 1934 the number of shipments handled in air-express service was 139 per cent greater than the 1933 figure while the poundage represented an increase of 150 per cent. Furthermore, the volume of business for the first half of this year was 144 per cent greater than that for the entire year 1932 and nearly 600 per cent greater than 1931. Revenue has meanwhile kept pace with the gains in traffic, the report says, and a recent analysis of air-express shipments revealed that more than 30 per cent has been handled in co-ordinated air-rail or rail-air service.

Fuel Association to Hold Meeting

The International Railway Fuel Association, with the co-operation and approval of the American Railway Association, has

Continued on next left-hand page

RAILROAD DIESELS FOR RAILROAD MEN



IN recent years railroads in general have been extending terminals—that is, they have been operating both freight and passenger trains over longer distances. No question but what this has been a very economical innovation.

But it has increased tremendously the cost of the switching services that still remain at these former terminals. Such servicing facilities as coal docks, ashpits, water towers, etc., if still retained at these outlying terminals must now be charged entirely to the switching service—or if eliminated, the switchers must be serviced from the new distant terminal. Either case means new increased costs.

Here is a situation made-to-order for the Diesel Switcher which requires none of these expensive facilities for its servicing or maintenance.

This advertisement (No. 8 of a series) presents another of the many factors which, all combined, make the Alco Diesel an outstanding purchase.

AMERICAN LOCOMOTIVE COMPANY
ALCO DIESEL
30 CHURCH STREET NEW YORK N.Y.

arranged to hold a two-day meeting at the Hotel Sherman, Chicago, on September 17 and 18. The meeting will mark the twenty-sixth year of the association's work on railway fuel and will be the first meeting held by the association in three years, during which important fuel developments have arisen, including increases in fuel costs. The meeting will be addressed by a leading executive of the coal industry, a prominent railway mechanical officer and a representative of the federal co-ordinator, and the program will also include reports of standing committees, as follows:

Front Ends, Grates and Ash Pans
Fuel Distribution and Statistics
Fuel Stations
Inspection and Preparation of Coal
Locomotive Firing Practice—Coal
Locomotive Firing Practice—Oil
New Locomotive Fuel Economy Devices
Steam Turbine and Steam Condensing Locomotives
Storage—Coal
Storage—Oil
Stationary Boiler Plants—Coal
Stationary Boiler Plants—Oil

Meetings & Conventions

The following list gives names of secretaries, date of next or regular meetings and places of meetings:

AIR BRAKE ASSOCIATION.—T. L. Burton, c/o Westinghouse Air Brake Co., 34th floor, Empire State Building, New York, N. Y.
ALLIED RAILWAY SUPPLY ASSOCIATION.—F. W. Venton, Crane Company, 836 S. Michigan Ave., Chicago, Ill. To meet with Air Brake Association, Car Department Officers' Association, International Railroad Master Blacksmiths' Association, International Railway Fuel Association, International Railway General Foremen's Association, Master Boiler Makers' Association and the Traveling Engineers' Association.
AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—W. R. Curtis, F. T. R., M. & O. R. R., Chicago, Ill.
AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. L. Duncan, 332 S. Michigan Ave., Chicago, Ill. Annual meeting, September 25-27, 1934, Railroad Conference Room, Union Station, Chicago, Ill.
AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York, N. Y. Annual meeting, October 25-26, 1934, St. Louis, Mo.
AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—F. O. Whiteman, Union Station, St. Louis, Mo. Annual meeting, 1935, Chicago, Ill.
AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.—E. A. Abbott, Poole Bros., Inc., 85 W. Harrison St., Chicago, Ill. Annual meeting, January 18-19, 1935.
AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.—F. R. Borger, C. I. & L. Ry., 836 S. Federal St., Chicago, Ill. Annual meeting, October 29-31, 1934, Waldorf-Astoria Hotel, New York, N. Y.
AMERICAN RAILWAY ASSOCIATION.—H. J. Forster, 30 Vesey St., New York, N. Y.
Division I.—Operating.—J. C. Caviston, 30 Vesey St., New York, N. Y.
Freight Station Section.—R. O. Wells, Freight Agent, Illinois Central Railroad, Chicago, Ill.
Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.
Protective Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.
Safety Section.—J. C. Caviston, 30 Vesey St., New York, N. Y. Annual meeting, October 2-4, 1934, Hotel Cleveland, Cleveland, Ohio.
Telegraph and Telephone Section.—W. A. Fairbanks, 30 Vesey St., New York, N. Y. Annual meeting, June 25-27, 1935, Hotel Stevens, Chicago, Ill.
Division II.—Transportation.—G. W. Covert, 59 E. Van Buren St., Chicago, Ill.
Division III.—Traffic.—J. Gottschalk, 143 Liberty St., New York, N. Y.
Division IV.—Engineering.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 12-14, 1935, Palmer House, Chicago, Ill.
Construction and Maintenance Section.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 12-14, 1935, Palmer House, Chicago, Ill.
Electrical Section.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, October 25, 1934, Philadelphia, Pa.

Signal Section.—R. H. C. Balliet, 30 Vesey St., New York, N. Y.
Division V.—Mechanical.—V. R. Hawthorne, 59 E. Van Buren St., Chicago, Ill.
Division VI.—Purchases and Stores.—W. J. Farrell, 30 Vesey St., New York, N. Y.
Division VII.—Freight Claims.—Lewis Pilcher, 59 E. Van Buren St., Chicago, Ill.
Division VIII.—Motor Transport.—George M. Campbell, 30 Vesey St., New York, N. Y.
Car Service Division.—C. A. Buch, 17th and H Sts., N. W., Washington, D. C.
AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—C. A. Lichty, C. & N. W. Ry., 319 N. Waller Ave., Chicago, Ill. Annual meeting, October 16-18, 1934, Chicago, Ill.
AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—E. H. Gurton, Mgr., Land Settlement and Development, C. N. R. St. Paul, Minn. Semi-annual meeting, December 6-7, 1934, Hotel Sherman, Chicago, Ill.
AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in co-operation with the American Railway Association, Division IV.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 12-14, 1935, Palmer House, Chicago, Ill.
AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—J. L. James, L. & N. Employees' Magazine, Louisville, Ky. Annual meeting, October 2, 1934, Hotel Cleveland, Cleveland, Ohio.
AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—G. G. Macina, C. M., St. P. & P. R. R., 11402 Calumet Ave., Chicago, Ill. Exhibit by Tool Foremen Suppliers' Association.
AMERICAN SHORT LINE RAILROAD ASSOCIATION.—R. E. Schindler, Union Trust Bldg., Washington, D. C.
AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—Calvin W. Rice, 29 W. 39th St., New York, N. Y. Annual meeting, December 3-7, 1934, at 29 W. 39th St. Railroad Division.—Marion B. Richardson, Ahrens & Richardson, 30 Church St., New York, N. Y.
AMERICAN TRANSIT ASSOCIATION.—Guy C. Hecker, 292 Madison Ave., New York, N. Y. Annual meeting, September 24-27, 1934, Cleveland Public Auditorium, Cleveland, Ohio. Exhibit, September 22-27.
AMERICAN WOOD PRESERVERS' ASSOCIATION.—H. L. Dawson, 1427 Eye St., N. W., Washington, D. C. Annual meeting, January 22-24, 1935, New York, N. Y.
ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Chief Clerk and Claim Agent, General Claims Department, Alton R. R., 340 W. Harrison St., Chicago, Ill. Annual meeting, 1935, New York, N. Y.
ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.—Jos. A. Andreucetti, C. & N. W., 1519 Daily News Building, 400 W. Madison St., Chicago, Ill. Annual meeting, October 4-5, 1934, Hotel Sherman, Chicago, Ill. Exhibit by Railway Electrical Supply Manufacturers' Association.
ASSOCIATION OF RAILWAY EXECUTIVES.—Stanley J. Strong, Transportation Building, Washington, D. C.
BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—J. W. Shoop, The Lehon Company, Oakley Ave., 44th and 45th Sts., Chicago, Ill. Meets with American Railway Bridge and Building Association.
CANADIAN RAILWAY CLUB.—C. R. Crook, 2276 Wilson Ave., N. D. G., Montreal, Que. Regular meetings, second Monday of each month, except June, July and August, Windsor Hotel, Montreal, Que.
CAR DEPARTMENT OFFICERS' ASSOCIATION.—A. S. Sternberg, M. C. B. Belt Ry. of Chicago, 7926 S. Morgan St., Chicago, Ill.
CAR FOREMEN'S ASSOCIATION OF CHICAGO.—G. K. Oliver, 2514 W. 55 St., Chicago, Ill. Regular meetings, second Monday of each month, except June, July and August, La Salle Hotel, Chicago, Ill.
CAR FOREMEN'S ASSOCIATION OF LOS ANGELES.—J. W. Krause, Room 299, 610 S. Main St., Los Angeles, Cal. Club not active at present.
CAR FOREMEN'S ASSOCIATION OF ST. LOUIS.—J. F. Brady, Main and Barton Sts., St. Louis, Mo. Operation suspended indefinitely.
CENTRAL RAILWAY CLUB OF BUFFALO.—M. D. Reed, 1817 Hotel Statler, McKinley Square, Buffalo, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.
CINCINNATI RAILWAY CLUB.—D. R. Boyd, 2920 Utopia Place, Hyde Park, Cincinnati, Ohio. Operation suspended indefinitely.
CLEVELAND RAILWAY CLUB.—F. L. Frericks, 14416 Alder Ave., Cleveland, Ohio. Meetings temporarily suspended.
INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.—W. J. Mayer, Michigan Central R. R., Detroit, Mich.
INTERNATIONAL RAILWAY FUEL ASSOCIATION.—T. D. Smith, 1660 Old Colony Building, Chicago, Ill.
INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.—Wm. Hall, 1061 W. Wabasha St., Winona, Minn.
MASTER BOILER MAKERS' ASSOCIATION.—A. F. Stiglmeier, 29 Parkwood St., Albany, N. Y.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—James B. Walker, 270 Madison Ave., New York, N. Y. Annual meeting, November 12-15, 1934, Willard Hotel, Washington, D. C.
NATIONAL RAILWAY APPLIANCE ASSOCIATION.—C. W. Kelly, Suite 322, 910 S. Michigan Ave., Chicago, Ill.
NATIONAL SAFETY COUNCIL.—Steam Railroad Section (See Safety Section, American Railway Association).
NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Copley-Plaza Hotel, Boston, Mass.
NEW YORK RAILROAD CLUB.—D. W. Pye, 30 Church St., New York, N. Y. Regular meetings, third Friday of each month, except June, July and August, 29 W. 39th St., New York, N. Y.
PACIFIC RAILWAY CLUB.—William S. Wollner, P. O. Box 3275, San Francisco, Cal. Regular meetings, second Thursday of each month, alternately at San Francisco and Oakland, excepting July at Los Angeles and October at Sacramento.
RAILWAY ACCOUNTING OFFICERS' ASSOCIATION.—E. R. Woodson, Transportation Building, Washington, D. C. Annual meeting, 1935, Detroit, Mich.
RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton (Treas. and Asst. Sec.), First National Bank Building, Chicago, Ill. Annual meeting, November, 1934, New York, N. Y.
RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 1941 Oliver Building, Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.
RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.—Edward Wray, 9 S. Clinton St., Chicago, Ill. Meets with Association of Railway Electrical Engineers.
RAILWAY FIRE PROTECTION ASSOCIATION.—R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md. Annual meeting, October 16-17, 1934, Congress Hotel, Chicago, Ill.
RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 1941 Oliver Building, Pittsburgh, Pa. Meets with Mechanical Division, Purchases and Stores Division and Motor Transport Division, American Railway Association.
RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with Telegraph and Telephone Section of A. R. A. Division I.
RAILWAY TIE ASSOCIATION.—A. S. Fathman, 1252 Syndicate Trust Building, St. Louis, Mo.
RAILWAY TREASURY OFFICERS' ASSOCIATION.—L. W. Cox, 1428 Broad Street Station Building, Philadelphia, Pa. Annual meeting, September 21-22, 1934, Greenbrier Hotel, White Sulphur Springs, W. Va.
ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—T. F. Donahoe, Gen. Supvr. Road, Baltimore & Ohio, Pittsburgh, Pa. Annual meeting, September 18-20, 1934, Hotel Stevens, Chicago, Ill.
ST. LOUIS RAILWAY CLUB.—B. W. Frauenthal, Drawer 24, M. P. O., St. Louis, Mo. Meetings temporarily suspended.
SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with A. R. A. Signal Section.
SOCIETY OF OFFICERS, EASTERN ASSOCIATIONS OF RAILROAD VETERANS.—M. W. Jones, Baltimore & Ohio, Mt. Royal Station, Baltimore, Md. Annual meeting, October 6-7, 1934, Hotel Lafayette, Buffalo, N. Y.
SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.
SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—R. G. Parks, A. B. & C. R. R., Atlanta, Ga.
SUPPLY MEN'S ASSOCIATION.—F. H. Hancock, Treasurer, Louisville Varnish Co., Louisville, Ky. Meets with A. R. A. Division V, Equipment Painting Section.
TOOL FOREMEN SUPPLIERS' ASSOCIATION.—E. E. Caswell, Union Twist Drill Co., 11 S. Clinton St., Chicago, Ill. Meets with American Railway Tool Foremen's Association.
TORONTO RAILWAY CLUB.—N. A. Walford, P. O. Box 8, Terminal "A," Toronto, Ont. Regular meetings, first Friday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.
TRACK SUPPLY ASSOCIATION.—L. C. Ryan, Oxweld Railroad Service Co., Carbon & Carbide Building, Chicago, Ill. Meets with Roadmasters' and Maintenance of Way Association.
TRAVELING ENGINEERS' ASSOCIATION.—W. O. Thompson, 1177 E. 98th St., Cleveland, Ohio.
WESTERN RAILWAY CLUB.—C. L. Emerson, C. M., St. P. & P. Chicago, Ill. Regular meetings, third Monday of each month, except June, July, August and September, Hotel Sherman, Chicago, Ill.

Continued on next left-hand page



"FREIGHT CAR EFFICIENCY-

-means handling a given
tonnage with the least
★★ number of car days"

—says a mid-western road where an installation of "Union" Electro-Pneumatic Car Retarders is in service, in a circular to its employees.

As a direct result of the car retarder installation the following major benefits and advantages are secured:

1. Main classification yard expenses cut approximately 29 cents per car.
2. Elimination of switching at other yards and other incidentals saves \$47,058 annually.

3. Expedited movement of foreign equipment saves approximately 25,000 car days per year.

"Union" Electro-Pneumatic Car Retarders speed up freight car classification, reduce delays and personal injuries, reduce damage to equipment and lading, permit consolidation of classification yards, reduce yard expenses and provide improved service to shippers. They quickly liquidate the investment.



1881

Union Switch & Signal Co.

1934

SWISSVALE, PA.

NEW YORK

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ST. LOUIS

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Equipment and Supplies

P.W.A. Advances to Railroads

Up to August 1 the Public Works Administration had advanced \$86,402,000 to 25 railroads on the allotments, amounting to \$190,950,500, made to 31 individual roads. Advances amounting to \$32,605,000 had been made to the Pennsylvania, to which \$80,650,000 had been allotted.

PASSENGER CARS

THE CHICAGO, BURLINGTON & QUINCY has placed an order with the Edward G. Budd Manufacturing Company, Philadelphia, Pa., for the construction of two additional high-speed, streamlined, three-car articulated trains similar to the "Zephyr." These trains are to be placed in regular daylight service between Chicago and Minneapolis-St. Paul, Minn., between which points they will operate in opposite directions daily. Unlike the present Zephyr, the new trains will not carry mail, the additional space gained through the elimination of the mail compartment being given over to the accommodation of additional passengers. Other changes, principally of a minor character, will be embodied in the new trains.

MISCELLANEOUS

URUGUAYAN STATE RAILWAYS.—The J. G. Brill Company, Philadelphia, Pa., has placed with the Timken Roller Bearing Company an order for boxes and bearings to be used on four rail motor cars which it is building for the Uruguayan State Railways.

Construction

CHESAPEAKE & OHIO.—Contracts involving work estimated to cost a total of more than \$700,000 have recently been awarded by this road. The largest, awarded to Boxley Brothers Company, Orange, Va., covers work in connection with the lowering of the C. & O. track through old Big Bend tunnel at Talcott, W. Va., at a cost of approximately \$262,000. The second, for work on revision of line at Chillicothe, Ohio, at a cost of approximately \$260,000, was awarded to C. R. Cummins, Inc., Cleveland, Ohio, while a third, for the enlargement of the old Lewis tunnel at Jerrys Run, Va., at a cost of \$106,000, was awarded to Sturm & Dillard Company, Columbus, Ohio. The Lowensohn Construction Company, Cleveland, received a contract for converting the Sinking Creek tunnel, Leon, Ky., into open cut, at a cost of approximately \$80,000. In addition, this road plans in the near future to request bids for filling work at viaducts Nos. 6017 and 6018 at Maysville, Ky., while with its own forces it will enlarge Princess tunnel at Princess, Ky., the latter at a cost of approximately \$25,000.

Financial

ALABAMA, TENNESSEE & NORTHERN.—*Change in Interest Rate.*—This company applied to the Interstate Commerce Commission for authority to extend the date of payment on coupons on \$1,672,860 of its prior lien mortgage bonds from July 1, 1934, and January 1, 1935, to July 1, 1939, and to change the interest rate from 6 per cent to 4 per cent. Similarly, the company sought to extend the interest payment on \$1,959,429 of its general mortgage bonds due January 1 and July 1, 1935, to January 1, 1940, reducing the rate to 4 per cent. The company also desired to reduce the interest rate on subsequent coupons on its prior lien bonds to as much as it "can pay in multiples of one per cent out of 75 per cent of its net income available for such purposes," the interest to be cumulative after January 1, 1937. In the case of the general mortgage bonds, the plan is to pay as much interest up to 4 per cent, non-cumulative, as it "can pay in multiples of one per cent out of 75 per cent of the net income available for such purposes, after payment of current interest and cumulative interest on the prior lien bonds." The Commission granted the desired authority and handled the application as constituting a new issue of bonds.

BALTIMORE & OHIO.—*Notes.*—The Interstate Commerce Commission has authorized this company to issue and sell \$50,000,000 of its 4½ per cent secured notes, maturing 1939. Kuhn, Loeb & Co. and Speyer & Co. are acting as agents for the sale of the issue at a fee of one per cent (the issue being offered to the public at par). Such part of the issue as may not be thus sold to the public will be taken by the Reconstruction Finance Corporation at 99. As collateral the company is posting securities which had a market value of \$84,156,000 on July 2.

CHICAGO, ROCK ISLAND & PACIFIC.—*Injunction Upheld.*—The United States Circuit Court of Appeals at Chicago, on July 27, handed down a decision upholding an injunction granted by Federal Judge James H. Wilkerson, restraining the Reconstruction Finance Corporation and five banks from selling \$54,000,000 of collateral of the Rock Island. The collateral secures loans of \$17,784,000. The railroad is now being operated by three trustees in bankruptcy. "The appellants," the ruling stated, "overestimate dangers of such an injunction order. It is not irrevocable and may be vacated. It may at any time be changed upon a convincing showing by creditors. The court will protect the appellants against possible injury traceable to frozen assets. It will endeavor to effectuate a plan which will result in the full payment of the appellants' claims and give the maximum safety and security for the holders of other bonds and obligations of debt."

MINNEAPOLIS & ST. LOUIS.—*Ordered Sold.*—This railroad, which has been in receivership since 1923, will be sold to the highest bidder at a public auction at Minneapolis, Minn., on September 5, according to an announcement by H. S. Abbott,

special master in chancery. The sale will be held at 10.00 a.m. at the main entrance to the division superintendent's office at the Cedar Lake yards (Minneapolis).

NORTON & NORTHERN.—*Abandonment.*—The Interstate Commerce Commission has authorized this company to abandon as to interstate and foreign commerce its railroad extending from Wise, Va., to the Bear Creek yard of the Interstate Railroad, 5.5 miles.

PENNSYLVANIA.—*Bonds.*—The Interstate Commerce Commission has approved the issue by this company of \$50,000,000 of 4¼ per cent series E bonds, maturing 1984, which were sold to Kuhn, Loeb & Co. at 95, making the cost to the company approximately 4½ per cent. The commission stipulated the provision of a sinking fund to be established by setting aside each year out of net income one half of one per cent of the issue outstanding—this fund to be used to purchase those bonds of the issue offered at the lowest price if not more than par. If insufficient bonds are offered at such a price, the fund is to be invested in government securities.

ST. LOUIS-SAN FRANCISCO.—*Reorganization.*—Upon consideration of a motion filed by the Railroad Credit Corporation on June 1, the Interstate Commerce Commission has authorized its chief counsel to present to the federal court at St. Louis an application requesting that the court, after a hearing upon notice to the stockholders and other parties, shall determine whether or not the company is insolvent. The Railroad Credit Corporation, which had made a loan to the company before the bankruptcy proceedings were instituted, had asked that the commission render a report and recommend a plan for a reorganization of the company or that, if in the opinion of the commission no plan can now be devised likely to receive the approval of the security holders, it so report to the court with a recommendation that proceedings under the bankruptcy act be dismissed. The Railroad Credit Corporation's interest is in the assurance given at the time it made the loan that it would receive par of its loans out of a new issue of bonds under a reorganization.

WESTERN PACIFIC.—*R. F. C. Loan.*—This company has withdrawn its application for an extension to January 1, 1937, of the maturity of loans from the Reconstruction Finance Corporation amounting to \$3,063,000 in view of modifications which have taken place in the plan being presented to the first mortgage bondholders for an extension of interest payments.

Dividends Declared

Dayton & Michigan.—87½c, semi-annually; 8 Per Cent Preferred, \$1.00, quarterly, both payable October 1 to holders of record September 15.
Portland (Me.).—\$2.50, semi-annually, payable August 1 to holders of record July 14.

Average Prices of Stocks and of Bonds

	July 31	Last week	Last year
Average price of 20 representative railway stocks..	34.72	37.02	43.85
Average price of 20 representative railway bonds..	74.45	76.23	73.12

Continued on next left-hand page

BOILER TUBES at their best



PIERCED *from* **SOLID STEEL!**

SEAMLESS—NO WELDS

UNUSUAL STRENGTH AND DUCTILITY

UNIFORM METALLIC STRUCTURE

HIGH RESISTANCE TO CORROSION

READILY EXPANDED, ROLLED, AND BEADED


There is no weld

No weld—no long line of possible weakness. No chance, no dependence on the human element, no uncertainty of any kind need be allowed for, as affecting the uniform wall strength of a NATIONAL Seamless Boiler Tube. One continuous hollow cylinder, pierced from a solid billet, expanded and rolled at proper and definitely controlled temperatures to produce grain refinement and uniform transverse and longitudinal strength. A balanced, homogeneous unit—unsurpassed from a manufacturing standpoint.

Likewise, from a service standpoint NATIONAL Seamless Boiler Tubes represent the ultimate of security. In countless railway, marine, and stationary boiler installations, they have proved reliable in every way under the most trying conditions. To get the advantage of the highest quality seamless boiler tubes, specify NATIONAL-SHELBY—

America's Preferred Boiler Tubes

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NATIONAL SEAMLESS

BOILER TUBES—SAFE ENDS—SUPERHEATER TUBES—CONDENSER TUBING—ARCH TUBES—SUPERHEATER PIPES—STAY-BOLT MATERIAL

Railway Officers

EXECUTIVE

F. S. Collins has been appointed vice-president of the Danville & Western, the Carolina & Northwestern, the High Point, Randleman, Asheboro & Southern, the Blue Ridge and the Yadkin with headquarters at Washington, D. C., succeeding **George H. Dugan** who has been granted leave to serve as a member of the National Railroad Adjustment Board.

OPERATING

J. L. Hayes has been appointed superintendent of the Cedar Rapids-Dakota division of the Chicago, Rock Island & Pacific, with headquarters at Cedar Rapids, Iowa, succeeding **A. L. Haldeman** who has retired.

F. H. Garner, trainmaster of the Western division of the New York Central, with headquarters at Elkhart, Ind., has been appointed senior trainmaster at the same point, with jurisdiction also over the West division of the Michigan Central. **L. W. Payne**, trainmaster on the New York Central at Lyons, Ill., has had his jurisdiction extended over the same territory.

TRAFFIC

G. C. Potter, general freight agent for the Danville & Western and the High Point, Randleman, Asheboro & Southern has been appointed general freight and passenger agent for these two roads and the Carolina & Northwestern and the Blue Ridge.

J. E. Garbesi, Jr., division freight agent of the Baltimore & Ohio, with headquarters at Parkersburg, W. Va., has been transferred to Wheeling, W. Va. **Carl H. Groninger**, district freight agent at Huntington, W. Va., succeeds Mr. Garbesi as division freight agent at Parkersburg. **Andrew C. Hartzell** succeeds Mr. Groninger as district freight agent at Huntington.

P. J. Mullaney, freight traffic manager of the Boston & Maine has been appointed also freight traffic manager of the Maine Central and the Portland Terminal, with headquarters at Portland, Me. **G. W. Miller**, general freight agent for the Maine Central at Portland, has been appointed assistant freight traffic manager for this road and the Portland Terminal with the same headquarters. **C. K. Hall**, assistant general freight agent with headquarters at Portland, has been appointed general freight agent at the same point. The position of assistant general freight agent is discontinued.

W. C. Ragin, who has been appointed eastern traffic manager of the Atlantic Coast Line with headquarters at New York, as reported in the *Railway Age* of July 28, was born on August 10, 1880, at Summer-

ton, S. C. He attended public schools at Summerton and Sumter, S. C. and Emory College, Oxford, Ga. Mr. Ragin entered the service of the Atlantic Coast Line at Wilmington, N. C., as stenographer in the general office in August, 1898. In February, 1902, he was sent to Macon, Ga., as soliciting agent and in November, 1905, he became freight and passenger agent at Goldsboro, N. C. He was appointed special traffic agent at Savannah, Ga., in September, 1908. From the following year to March, 1914, Mr. Ragin was commercial agent successively at Ocala, Fla., and Albany, Ga., being appointed division freight agent at Montgomery, Ala., on the latter date. He was appointed assistant general freight agent at Savannah, Ga., in December, 1916, and was sent to Wilmington, N. C. in January, 1922, in the same capacity. He became general freight agent at the latter point in March, 1926, and assistant freight traffic manager in February, 1930, with the same headquarters, which position he held until his recent appointment as eastern traffic manager.

ENGINEERING AND SIGNALING

O. E. Williams has been appointed inspecting engineer of track of the Great Northern, with headquarters at St. Paul, Minn., to succeed **Julius H. Goos**, who has retired.

M. H. Doughty, engineer maintenance of way of the Delaware, Lackawanna & Western, with headquarters at Hoboken, N. J., has been promoted to assistant to chief engineer, with the same headquarters. Mr. Doughty was born in September, 1877, at Maxville Prairie, Wis., and received his higher education in the State College of South Dakota, from which he was graduated in 1900, with the degree of B. S. in Engineering. During 1901 and the early



M. H. Doughty

part of 1902, he continued his studies in civil engineering at the University of Minnesota, and then, on March 1 of the latter year, he accepted a position on the Lackawanna as a transit man in the engineering department. From 1902 to 1909, Mr. Doughty held various positions in the engineering department, and in 1910 he was appointed assistant to the chief engineer. In 1912 he was appointed general

manager of the Moore Timber Company, Panama City, Fla., a company owned and operated by the Lackawanna, and in 1914 returned to the parent company to become again assistant to the chief engineer, in charge of valuation and other matters as assigned. In 1917 he was appointed division engineer at Hoboken. Mr. Doughty was appointed engineer of maintenance of way in 1933, the position he held until his recent appointment.

MECHANICAL

A. D. Bingman has been appointed master mechanic for the New York Central with headquarters at Albany, N. Y.

C. F. Parsons, master mechanic for the New York Central with headquarters at Albany, N. Y., has been appointed assistant superintendent of equipment at New York.

PURCHASES AND STORES

O. Nelson, who has retired from the position of assistant general storekeeper of the Union Pacific Railroad and the St. Joseph & Grand Island, had been connected with the stores department of the Union Pacific continuously for more than 49 years. He was born in Sweden on March 20, 1864, and entered the service of the Union Pacific in February, 1885, serving as a messenger, helper and clerk in the stores department until August of the same year, when he was appointed storekeeper, local stores. Three years later, Mr. Nelson was advanced to traveling storekeeper and timber inspector. In September, 1892, he was made general foreman at the general store at Omaha. From 1912 to 1914, he served as a division storekeeper and, in the latter year, he was appointed a traveling storekeeper, holding this position until September, 1918, when he was appointed acting general storekeeper and chairman of the general reclamation committee. In October, 1920, he was advanced to general storekeeper, and in 1932, he was appointed to the newly created position of assistant general storekeeper with jurisdiction over the Union Pacific Railroad and the St. Joseph & Grand Island. He held this position until his retirement.

OBITUARY

Charles L. Andrus, general counsel for the New York, Ontario & Western with headquarters at New York, died on July 24 on board the liner Olympic. Mr. Andrus was 74 years old.

W. G. Brown, engineer maintenance of way on the Florida East Coast, with headquarters at St. Augustine, Fla., died on July 14 in Johns Hopkins University Hospital, Baltimore, Md., as the result of complications arising from a heart disorder. Mr. Brown was a graduate of the University of the South. He was for several years with the Louisville & Nashville, practically all of his railway service having been with that road prior to 1921 when he became associated with the Florida East Coast as engineer maintenance of way. He was about 62 years of age.

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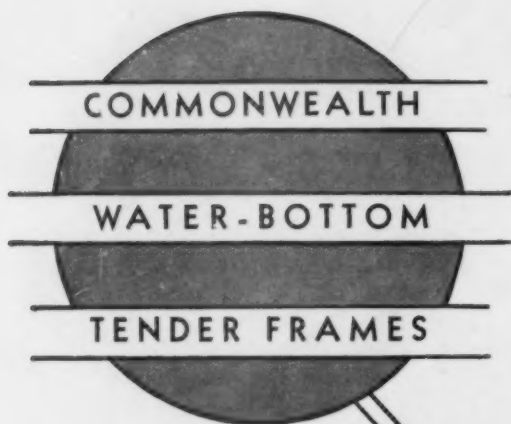
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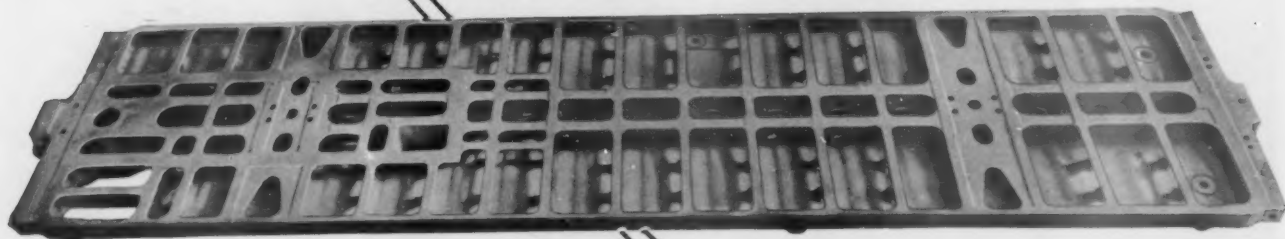
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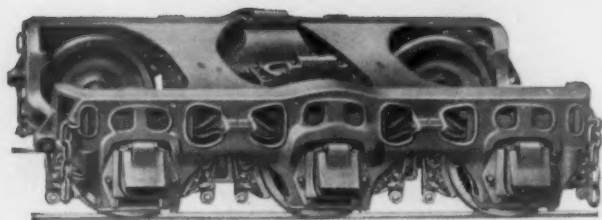


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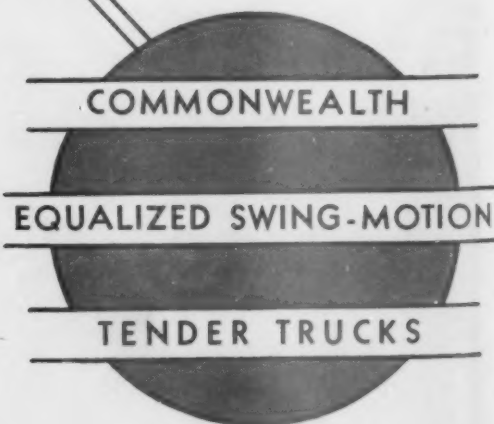


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Capacity Without Increasing Size of Tender
Minimum Weight—Maximum Strength



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